

=> fil reg
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STRUCTURE FILE UPDATES: 15 NOV 2009 HIGHEST RN 1192409-16-7
 DICTIONARY FILE UPDATES: 15 NOV 2009 HIGHEST RN 1192409-16-7

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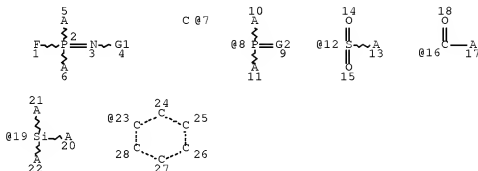
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=> d que stat 124
 L8 SCR 2043 OR 2049
 L20 STR



VAR G1=8/12/16/19/23
 VAR G2=O/S/7/SI/N/P
 NODE ATTRIBUTES:
 NSPEC IS RC AT 7
 NSPEC IS RC AT 10
 NSPEC IS RC AT 11
 NSPEC IS RC AT 13
 NSPEC IS RC AT 17
 NSPEC IS RC AT 20
 NSPEC IS RC AT 21
 NSPEC IS RC AT 22
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

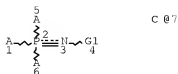
November 16, 2009

10/540,558

2

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 28

STEREO ATTRIBUTES: NONE
L21 STR



VAR G1=7/SI/N/P/O/S

NODE ATTRIBUTES:

NSPEC	IS	RC	AT	1
NSPEC	IS	RC	AT	5
NSPEC	IS	RC	AT	6
NSPEC	IS	RC	AT	7

DEFAULT MLEVEL IS ATOM
DEFAULT ELEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 7

STEREO ATTRIBUTES: NONE

L22 93768 SEA FILE=REGISTRY SSS FUL L21
L24 141 SEA FILE=REGISTRY SUB=L22 SSS FUL L20 NOT L8

100.0% PROCESSED 265 ITERATIONS 141 ANSWERS
SEARCH TIME: 00.00.01

=> d his

(FILE 'HOME' ENTERED AT 17:52:12 ON 16 NOV 2009)

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ACT WEI558S1/A

L1 STR
L2 (93768)SEA FILE=REGISTRY SSS FUL L1
L3 STR
L4 SCR 2043 OR 2049
L5 222 SEA FILE=REGISTRY SUB=L2 SSS FUL L3 NOT L4

ACT WEI558S2/A

L6 STR
L7 (93768)SEA FILE=REGISTRY SSS FUL L6
L8 SCR 2043 OR 2049
L9 STR
L10 186 SEA FILE=REGISTRY SUB=L7 SSS FUL L9 NOT L8

L11 36 S L5 NOT L10

FILE 'HCAPLUS' ENTERED AT 17:53:54 ON 16 NOV 2009

L12 58 S L10

L13 32 S L11
L14 84 S L12 OR L13
L15 QUE ELECTROLY?
L16 QUE BATTERY
L17 10 S L14 AND L15-16
L18 74 S L14 NOT L17
L19 73 S L18 AND (PY<=2003 OR PRY<=2003 OR AY<=2003)

FILE 'LREGISTRY' ENTERED AT 17:58:33 ON 16 NOV 2009
L20 STR L9

FILE 'REGISTRY' ENTERED AT 18:00:10 ON 16 NOV 2009
ACT WEI558/A

L21 STR
L22 93768 SEA FILE=REGISTRY SSS FUL L21

L23 9 S L20 NOT L8 SSS SAM SUB=L22
L24 141 S L20 NOT L8 SSS FUL SUB=L22

FILE 'HCAPLUS' ENTERED AT 18:02:13 ON 16 NOV 2009
L25 51 S L24
L26 42 S L19 AND L25

=> fil hcap

FILE 'HCAPLUS' ENTERED AT 18:05:29 ON 16 NOV 2009
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FILE COVERS 1907 - 16 Nov 2009 VOL 151 ISS 21
FILE LAST UPDATED: 15 Nov 2009 (20091115/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2009

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2009.

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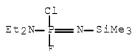
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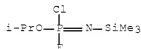
offer appear in NEWS 10.

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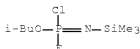
L26 ANSWER 1 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1996:609556 HCAPLUS [Full-text](#)
DOCUMENT NUMBER: 126:18954
ORIGINAL REFERENCE NO.: 126:3937a,3940a
TITLE: Synthesis of N-trimethylsilyl
chloro(fluoro)imidophosphates
AUTHOR(S): Zavorin, S. I.; Lermontov, S. A.; Martynov, I.
V.
CORPORATE SOURCE: Institut Fiziologicheskii Aktivnykh Veshchestv,
Chernogolovka, 142432, Russia
SOURCE: Izvestiya Akademii Nauk, Seriya Khimicheskaya (1996), (5), 1295-1296
CODEN: IASKEA
PUBLISHER: Institut Organicheskoi Khimii im. N. D.
Zelinskogo Rossiiskoi Akademii Nauk
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 126:18954
AB Treating RP(F)N(SiMe3)2 (R = Et2N, Me2CHO, Me2CHCH2O) with CCl3CN or CCl3CO2Et
in Et2O gave 20-85% RP(F)(Cl):NSiMe3.
IT 184352-03-2P 184352-05-4P
184352-07-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of trimethylsilyl chloro(fluoro)imidophosphates by
oxidative chlorination of bis(trimethylsilyl)
fluoroamidophosphites)
RN 184352-03-2 HCAPLUS
CN Phosphoramidimidic chloride fluoride,
N,N-diethyl-N'-(trimethylsilyl)- (9CI) (CA INDEX NAME)



RN 184352-05-4 HCAPLUS
CN Phosphorochloridofluoridimidic acid, (trimethylsilyl)-,
1-methylethyl ester (9CI) (CA INDEX NAME)



RN 184352-07-6 HCAPLUS
CN Phosphorochloridofluoridimidic acid, (trimethylsilyl)-,
2-methylpropyl ester (9CI) (CA INDEX NAME)



CC 29-7 (Organometallic and Organometalloidal Compounds)

IT 184352-03-2P 184352-05-4P

184352-07-6P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of trimethylsilyl chloro(fluoro)imidophosphates by oxidative chlorination of bis(trimethylsilyl) fluoroamidophosphites)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L26 ANSWER 2 OF 42 HCAPLUS COPYRIGHT 2009 ACS ON STN

ACCESSION NUMBER: 1995:575453 HCAPLUS Full-text

DOCUMENT NUMBER: 123:169731

ORIGINAL REFERENCE NO.: 123:30315a,30318a

TITLE: Fluoridolysis of N-phosphoryl phosphazenes

AUTHOR(S): Riesel, L.; Loewe, C.; Pauli, J.

CORPORATE SOURCE: Fachber. Chem., Humboldt-Univ., Berlin, Germany

SOURCE: Zeitschrift fuer Anorganische und Allgemeine Chemie (1995), 621(5), 865-70

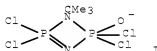
CODEN: ZAACAB; ISSN: 0044-2313

PUBLISHER: Barth

DOCUMENT TYPE: Journal

LANGUAGE: German

GI



AB In the reaction of the N-phosphoryl phosphazenes $\text{X}_3\text{P:NP(Y)X}_2$ ($\text{X} = \text{Cl}, \text{PhO}, \text{Et}_2\text{N}, \text{CF}_3\text{CF}_3\text{CH}_2\text{O}, \text{PrS}, \text{Ph}; \text{Y} = \text{O}, \text{S}$) with $\text{Et}_3\text{N} \cdot n\text{-HF}$ ($n \approx 3$ or 0.6) fluoro derivs. of N-phosphoryl phosphazenes as well as N-phosphorylated imidotetrafluorophosphates $[\text{F}_4\text{P:NP(Y)Cl}_2]^-$ ($\text{Y} = \text{O}, \text{S}$), and imidopentafluorophosphates, $[\text{F}_5\text{PNP(Y)X}_2]^-$ or $[\text{F}_5\text{PNHP(O)X}_2]^-$, are formed. T-BuNHPCl₂:NPOCl₂ reacts in acetonitrile with Et₃N or i-Pr₂EtN to form a product, representing probably the diazadiphosphetene I. T-BuNHPCl₂ = N-POCl₂ reacts in acetonitrile with Et₃N or i-Pr₂EtN to form a product, representing probably the diazadiphosphetene $[\text{t-BuN-PCl}_2 = \text{N-P(O-)(Cl)}_2]^-$ (5b).

IT 80156-08-7P 166832-15-1P

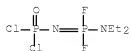
166832-16-2P 166832-19-5P 166832-27-5P

RL: SPN (Synthetic preparation); PREP (Preparation)

(fluoridolysis of N-phosphoryl phosphazenes)

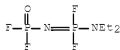
RN 80156-08-7 HCAPLUS

CN Phosphoramidic dichloride, [(diethylamino)difluorophosphoranylidene]- (9CI) (CA INDEX NAME)

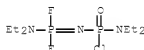


RN 166832-15-1 HCAPLUS

CN Phosphoramidic difluoride, [(diethylamino)difluorophosphoranylidene]-(9CI) (CA INDEX NAME)

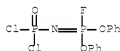


RN 166832-16-2 HCAPLUS

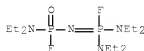
CN Phosphoramidimide difluoride,
N'-[chloro(diethylamino)phosphinyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

RN 166832-19-5 HCAPLUS

CN Phosphorofluoridimide acid, (dichlorophosphinyl)-, diphenyl ester (9CI) (CA INDEX NAME)



RN 166832-27-5 HCAPLUS

CN Phosphorodiamidic fluoride,
[bis(diethylamino)fluorophosphoranylidene]diethyl- (9CI) (CA INDEX NAME)

IT 16993-69-4P 25518-86-9P 80156-08-7P 166832-10-6P
166832-11-7P 166832-12-8P 166832-13-9P 166832-14-0P
166832-15-1P 166832-16-2P 166832-17-3P
166832-18-4P 166832-19-5P 166832-20-8P 166832-21-9P
166832-22-0P 166832-23-1P 166832-24-2P 166832-25-3P
166832-26-4P 166832-27-5P 166832-29-7P 166832-30-0P

RL: SPN (Synthetic preparation); PREP (Preparation)
(fluoridolysis of N-phosphoryl phosphazenes)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS
RECORD (1 CITINGS)

L26 ANSWER 3 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1995:400249 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 122:265509

ORIGINAL REFERENCE NO.: 122:48481a,48484a

TITLE: Reaction of Mes⁺NPCl with triphenylcarbenium
tetrafluoroborate

AUTHOR(S): Burford, Neil; Clyburne, Jason A. C.; Bakshi,
Pradip K.; Cameron, T. Stanley
CORPORATE SOURCE: Dep. Chem., Dalhousie Univ., Halifax, NS, B3H
4J3, Can.

SOURCE: Phosphorus, Sulfur and Silicon and the Related
Elements (1994), 93-94(1-4), 379-80
CODEN: PSSLEC; ISSN: 1042-6507

PUBLISHER: Gordon & Breach

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 122:265509

AB Reaction of RN:PCl [R = 2,4,6-(Me3C)3C6H2] with triphenylcarbenium salts (BF4
or PF6) produces a difluorophosphine, RN(CPh3)PF2, and not the expected
iminophosphonium cation. This compound then undergoes an Arbuzov-type
rearrangement to generate a difluoroiminophosphorane, RN:PF2CPh3 (I). I was
characterized by x-ray crystallog.

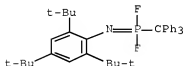
IT 162519-87-1P

RL: PRP (Properties); SPN (Synthetic preparation); PREP
(Preparation)

(reaction of [tri(tert-butyl)phenyl]iminophosphine chloride with
triphenylcarbenium tetrafluoroborate to give
difluoroiminophosphorane)

RN 162519-87-1 HCAPLUS

CN Benzenamine, N-[difluoro(triphenylmethyl)phosphoranylidene]-2,4,6-
tris(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)



CC 29-7 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 75

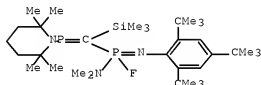
IT 162519-87-1P

RL: PRP (Properties); SPN (Synthetic preparation); PREP
(Preparation)

(reaction of [tri(tert-butyl)phenyl]iminophosphine chloride with
triphenylcarbenium tetrafluoroborate to give
difluoroiminophosphorane)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

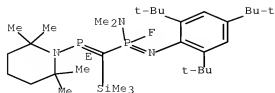
L26 ANSWER 4 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1995:206310 HCAPLUS Full-text
DOCUMENT NUMBER: 122:81519
ORIGINAL REFERENCE NO.: 122:15491a,15494a
TITLE: Reactions of stable (phosphino)(silyl)carbenes with iminophosphines [(dialkylamino)(2,2,6,6-tetramethylpiperidino)phosphino](trimethylsilyl)carbenes react with [(2,4,6-tri-tert-butylphenyl)imino]phosphines bearing different substituents at P to give methylenephosphineiminophosphoranes, e.g., I. Romanenko, Vadim; Gudima, Andrei O.; Chernega, Alexandre N.; Sotiropoulos, Jean-Marc; Alcaraz, Gilles; Bertrand, Guy
AUTHOR(S):
CORPORATE SOURCE: Inst. Org. Chem., Kiev, 253660, Ukraine
SOURCE: Bulletin de la Societe Chimique de France (1994), 131(7), 748-53
CODEN: BSCFAS; ISSN: 0037-8968
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

AB [(Dialkylamino)(2,2,6,6-tetramethylpiperidino)phosphino](trimethylsilyl)carbenes react with [(2,4,6-tri-tert-butylphenyl)imino]phosphines bearing different substituents at P to give methylenephosphineiminophosphoranes, e.g., I. With P-chloro and P-bromo iminophosphines, small amts. of the isomeric methylenephosphorane-iminophosphines were also obtained. [Bis(dicyclohexylamino)phosphino]trimethylsilyldiazomethane reacts with iodo[(2,4,6-tri-tert-butylphenyl)imino]phosphine to give a triazaphosphole. These results demonstrate the carbene behavior of phosphino(silyl)carbenes and bring further evidence of the synthetic importance of stable carbenes. The crystal structure of I was determined
IT 160464-17-5P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(crystal structure; reactions of stable (phosphino)(silyl)carbenes with iminophosphines)
RN 160464-17-5 HCAPLUS
CN Phosphonamidimidic fluoride, N,N-dimethyl-P-[(2,2,6,6-tetramethyl-1-piperidinyl)phosphinidenel(trimethylsilyl)methyl]-N'-[2,4,6-tris(1,1-dimethylethyl)phenyl]-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



CC 29-7 (Organometallic and Organometalloidal Compounds)

Section cross-reference(s): 75

IT 160464-17-5P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(crystal structure; reactions of stable (phosphino)(silyl)carbenes with iminophosphines)

OS.CITING REF COUNT: 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)

L26 ANSWER 5 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1994:298750 HCAPLUS Full-text

DOCUMENT NUMBER: 120:298750

ORIGINAL REFERENCE NO.: 120:52657a,52660a

TITLE: Fluorination of phosphorus(3+) derivatives by xenon difluoride

AUTHOR(S): Lermontov, S. A.; Popov, A. V.; Zavorin, S. I.; Sukhojenko, I. I.; Kuryleva, N. V.; Martynov, I. V.; Zefirov, N. S.; Stang, P.

CORPORATE SOURCE: Inst. Physiol. Active Comps., Chernogolovka, 142432, Russia

SOURCE: Journal of Fluorine Chemistry (1994), 66(3), 233-5

CODEN: JFLCAR; ISSN: 0022-1139

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 120:298750

AB Xenon difluoride, XeF₂, effectively fluorinates various phosphorus acid derivs. as well as hydrophosphoryl compds. Arbuzov rearrangement is followed by iso-Bu → tert-Bu isomerization in the case of iso-BuOPF₂.

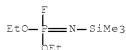
IT 80156-06-5P 155170-13-1P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of, by oxidative fluorination of phosphite derivative with xenon difluoride)

RN 80156-06-5 HCAPLUS

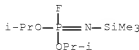
CN Phosphorofluoridimidic acid, (trimethylsilyl)-, diethyl ester (9CI) (CA INDEX NAME)



RN 155170-13-1 HCAPLUS

CN Phosponimidic acid, P-fluoro-N-(trimethylsilyl)-,

bis(1-methylethyl) ester (9CI) (CA INDEX NAME)



CC 29-7 (Organometallic and Organometalloidal Compounds)

IT 754-24-5P 1135-98-4P, Diphenylfluorophosphine oxide 5954-50-7P,

Dimethyl fluorophosphate 71181-74-3P 80156-06-5P

155170-13-1P 155170-14-2P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of, by oxidative fluorination of phosphite derivative with xenon difluoride)

OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)

L26 ANSWER 6 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1994:217842 HCAPLUS Full-text

DOCUMENT NUMBER: 120:217842

ORIGINAL REFERENCE NO.: 120:38697a,38700a

TITLE: Reaction of fluorophosphines with silylazides

AUTHOR(S): Riesel, L.; Friebe, R.; Sturm, D.

CORPORATE SOURCE: Fachber. Chem., Humboldt-Univ., Berlin, Germany

SOURCE: Zeitschrift fuer Anorganische und Allgemeine

Chemie (1993), 619(10), 1685-8

CODEN: ZAACAB; ISSN: 0044-2313

DOCUMENT TYPE: Journal

LANGUAGE: German

OTHER SOURCE(S): CASREACT 120:217842

AB The fluorophosphines Ph2PF (1), PhOPF2 (2), C5H10NPF2 (3), (Et2N)PF2 (4), and (Et2N)2PF (5) react with Me3SiN3 via azidophosphines R3-nP(N3)n to give oligo- and polyphosphazenes, (RR'P = N)n. [(Me2CH)2N]2PF (6), however, is oxidized by Me3SiN3 yielding the N-silylated phosphazene [(Me2CH)2N]2PF:NSiMe3 (7). Me3CPh2SiN3 is considerably less reactive. In contrast to Me3SiN3 it even oxidizes 5 and 1 forming (Et2N)2PF:NSiPh2CMe3 (10) and Ph2FP:NSiPh2CMe3, resp.

IT 153982-94-6P 153982-95-7P

153982-96-8P 153982-97-9P 153982-99-1P

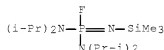
RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of)

RN 153982-94-6 HCAPLUS

CN Phosphorodiamidimidic fluoride,

N,N',N'-tetrakis(1-methylethyl)-N''-(trimethylsilyl)- (9CI) (CA INDEX NAME)

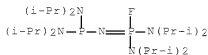


RN 153982-95-7 HCAPLUS

CN Phosphorodiamidimidic fluoride,

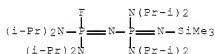
N''-[bis[bis(1-methylethyl)amino]phosphino]-N,N',N'-tetrakis(1-

methylethyl)- (9CI) (CA INDEX NAME)



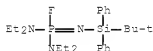
RN 153982-96-8 HCAPLUS

CN Phosphorodiamidimidic fluoride,
N''-[P,P-bis[bis(1-methylethyl)amino]-N-
(trimethylsilyl)phosphinimyl]-N,N,N',N'-tetrakis(1-methylethyl)-
(9CI) (CA INDEX NAME)



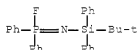
RN 153982-97-9 HCAPLUS

CN Phosphorodiamidimidic fluoride,
N,N,N',N'-tetraethyl-N''-[(1,1-dimethylethyl)diphenylsilyl]- (9CI)
(CA INDEX NAME)



RN 153982-99-1 HCAPLUS

CN Phosphinimidic fluoride, N-[(1,1-dimethylethyl)diphenylsilyl]-P,P-
diphenyl- (9CI) (CA INDEX NAME)



CC 29-7 (Organometallic and Organometalloidal Compounds)

IT 1110-78-7P 28212-47-7P, Poly[nitrilo(diphenylphosphoranylidene)]

94721-86-5P 138658-75-0P 153982-94-6P

153982-95-7P 153982-96-8P 153982-97-9P

153982-99-1P 153986-43-7P 153986-44-8P 153986-45-9P

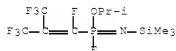
153986-46-0P 153986-47-1P

RL: SPN (Synthetic preparation); PREP (Preparation)

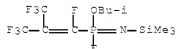
(preparation of)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS
RECORD (2 CITINGS)

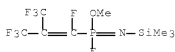
L26 ANSWER 7 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1991:514633 HCAPLUS Full-text
 DOCUMENT NUMBER: 115:114633
 ORIGINAL REFERENCE NO.: 115:19665a,19668a
 TITLE: Reaction of perfluoroisobutylene and
 perfluoropropylene with N-silylamidophosphites
 AUTHOR(S): Lermontov, S. A.; Velikokhat'ko, T. N.;
 Martynov, I. V.
 CORPORATE SOURCE: Inst. Fiziol. Akt. Veshchestv., Chernogolovka,
 USSR
 SOURCE: Izvestiya Akademii Nauk SSSR, Seriya
 Khimicheskaya (1991), (5), 1204-7
 CODEN: IASKA6; ISSN: 0002-3353
 DOCUMENT TYPE: Journal
 LANGUAGE: Russian
 OTHER SOURCE(S): CASREACT 115:114633
 AB Reaction of CF₂:C(CF₃)₂ with RR1PNR2(SiMe₃) (R = R₁ = EtO, R = Me₂CHO,
 Me₂CHCH₂O, R₁ = F, R₂ = SiMe₃; R = R₁ = EtO, R₂ = CMe₃; R = Me₂CHCH₂O, R₁ = F,
 R₂ = CMe₃) at -50° to -70° gave 50-70% RR1P(:NSiMe₃)CF:C(CF₃)₂. Reaction of
 RR1PN(SiMe₃)₂ (R = Me, R₁ = F; R = R₁ = EtO) with CF₂:CFCF₃ in an autoclave at
 70° gave RR1P(:NSiMe₃)CF:CFCF₃. A mechanism is proposed.
 IT 135764-40-8P 135764-41-9P
 135764-42-0P 135764-45-3P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 135764-40-8 HCAPLUS
 CN Phosphonofluoridimidic acid,
 P-[1,3,3,3-tetrafluoro-2-(trifluoromethyl)-1-propen-1-yl]-N-
 (trimethylsilyl)-, 1-methylethyl ester (CA INDEX NAME)



RN 135764-41-9 HCAPLUS
 CN Phosphonofluoridimidic acid,
 P-[1,3,3,3-tetrafluoro-2-(trifluoromethyl)-1-propen-1-yl]-N-
 (trimethylsilyl)-, 2-methylpropyl ester (CA INDEX NAME)

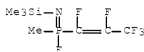


RN 135764-42-0 HCAPLUS
 CN Phosphonofluoridimidic acid,
 P-[1,3,3,3-tetrafluoro-2-(trifluoromethyl)-1-propen-1-yl]-N-
 (trimethylsilyl)-, methyl ester (CA INDEX NAME)



RN 135764-45-3 HCAPLUS

CN Phosphinimidic fluoride, P-methyl-P-(1,2,3,3,3-pentafluoro-1-propenyl)-N-(trimethylsilyl)- (9CI) (CA INDEX NAME)



CC 29-7 (Organometallic and Organometalloidal Compounds)

IT 135764-39-5P 135764-40-8P 135764-41-9P

135764-42-0P 135764-44-2P 135764-45-3P

135764-46-4P 135764-47-5P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

L26 ANSWER 8 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1990:145948 HCAPLUS Full-text

DOCUMENT NUMBER: 112:145948

ORIGINAL REFERENCE NO.: 112:24519a,24522a

TITLE: Chemical bonding in phosphonitrilic systems -
comparison of the electronic structures of
phosphonitrile fluoride cyclic trimer,
phosphonitrile fluoride cyclic tetramer, and
phosphorus nitride oxyfluoride ((F2PN)3,
(F2PN)4, and OP(F2)NP(F2)NPF3)

AUTHOR(S): Ferris, Kim F.; Duke, C. B.

CORPORATE SOURCE: Pacific Northwest Lab., Richland, WA, 99352, USA

SOURCE: International Journal of Quantum Chemistry,
Quantum Chemistry Symposium (1989),
23, 397-407

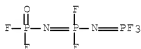
CODEN: IJQSDI; ISSN: 0161-3642

DOCUMENT TYPE: Journal

LANGUAGE: English

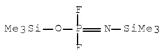
AB The electronic structure of phosphonitrilic systems contain both π ' (in plane) and π (out-of-plane) bonding systems. Earlier work in this laboratory has indicated that the d-orbital involvement in these systems affects primarily the electronic structure, and is modulated by ligand electronegativity. Ab initio MO calcs. were performed on a series of small phosphazene mols. [(F2PN)3, (F2PN)4, and OP(F2)NP(F2)NPF3] to elucidate the electronic and mol. structure of these mols. as models for polymeric systems. The chemical bonding and charge distribution in the phosphonitrilic trimers, tetramers, and these small fragments are highly polarized, primarily through the π and π' bonding networks. Our results indicate that while the majority of the electronic aspects of OP(F2)NP(F2)NPF3 can be described by analogies to (F2PN)3 and (F2PN)4, major geometric differences such as bond alternation are evident. The opening of the P-N-P bond angles in the linear fragment results in reduced overlap over multiple centers, promoting "islands of delocalization" first proposed by M. J. S. Dewar, et al., (1960).

IT 126050-28-0
 RL: PRP (Properties)
 (electronic structure and mol. structure of, ab-initio MO calcns.
 of)
 RN 126050-28-0 HCAPLUS
 CN Phosphorimidic trifluoride, [N-(difluorophosphinyl)-P,P-
 difluorophosphinimyl]- (9CI) (CA INDEX NAME)



CC 65-5 (General Physical Chemistry)
 IT 14700-00-6 15599-91-4 126050-28-0
 RL: PRP (Properties)
 (electronic structure and mol. structure of, ab-initio MO calcns.
 of)
 OS.CITING REF COUNT: 26 THERE ARE 26 CAPLUS RECORDS THAT CITE THIS
 RECORD (26 CITINGS)

L26 ANSWER 9 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1990:77366 HCAPLUS Full-text
 DOCUMENT NUMBER: 112:77366
 ORIGINAL REFERENCE NO.: 112:13231a,13234a
 TITLE: Oxidation of
 bis(trimethylsilyl)amidodifluorophosphite
 AUTHOR(S): Lermontov, S. A.; Sukhova, N. V.; Martynov, I.
 V.
 CORPORATE SOURCE: Inst. Fiziol. Akt. Veshchestv, Chernogolovka,
 USSR
 SOURCE: Izvestiya Akademii Nauk SSSR, Seriya
 Khimicheskaya (1989), (6), 1426-8
 CODEN: IASKA6; ISSN: 0002-3353
 DOCUMENT TYPE: Journal
 LANGUAGE: Russian
 OTHER SOURCE(S): CASREACT 112:77366
 AB Reaction of F2PN(SiMe3)2 with Me3COCl in pentane gave nearly equivalent amts.
 of Me3SiOPF2:NSiMe3 and F2P(O)NHSiMe3.
 IT 66416-57-7P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 66416-57-7 HCAPLUS
 CN Phosphorodifluoridimidic acid, (trimethylsilyl)-, trimethylsilyl
 ester (9CI) (CA INDEX NAME)



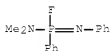
CC 29-7 (Organometallic and Organometalloidal Compounds)
 IT 25313-69-3P 66416-57-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

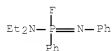
L26 ANSWER 10 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1988:631271 HCAPLUS Full-text
DOCUMENT NUMBER: 109:231271
ORIGINAL REFERENCE NO.: 109:38261a,38264a
TITLE: On the reaction of phosphorus(III) fluorides
with phenyl azide
AUTHOR(S): Singer, R. J.; Storz, W.; Schmutzler, R.
CORPORATE SOURCE: Dep. Chem., Univ. Technol., Loughborough/Leics.,
UK
SOURCE: Zeitschrift fuer Anorganische und Allgemeine
Chemie (1987), 555, 154-60
CODEN: ZAACAB; ISSN: 0044-2313
DOCUMENT TYPE: Journal
LANGUAGE: German
OTHER SOURCE(S): CASREACT 109:231271
GI



AB The Staudinger reaction of RR1PF (R = R1 = CMe3, Me2N, EtO; R = CMe3, R1 = F; R = Et, R1 = Et2N; R = Ph, R1 = Me2N, Et2N; R = Me2N, Et2N, R1 = F) with PhN3 gave 68-89% RR1P:NPh, whereas the reaction of PhPF2 with PhN3 gave 90% diazadiphosphetidine I.
IT 109659-53-2F 109659-57-6P 109678-04-8P
109659-74-7P 109659-76-9P 117556-00-0P 117556-01-1P 117556-02-2P
117556-03-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 109659-53-2 HCAPLUS
CN Phosphonamidimidic fluoride, N,N-dimethyl-N',P-diphenyl- (9CI) (CA INDEX NAME)

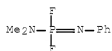


RN 109659-57-6 HCAPLUS
CN Phosphonamidimidic fluoride, N,N-diethyl-N',P-diphenyl- (9CI) (CA INDEX NAME)



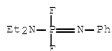
RN 109659-74-7 HCAPLUS

CN Phosphoramidimidic difluoride, N,N-dimethyl-N'-phenyl- (CA INDEX NAME)



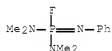
RN 109659-76-9 HCAPLUS

CN Phosphoramidimidic difluoride, N,N-diethyl-N'-phenyl- (CA INDEX NAME)



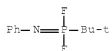
RN 109678-04-8 HCAPLUS

CN Phosphorodiamidimidic fluoride, N,N,N',N'-tetramethyl-N''-phenyl- (9CI) (CA INDEX NAME)



RN 117556-00-0 HCAPLUS

CN Phosphonimidic difluoride, P-(1,1-dimethylethyl)-N-phenyl- (CA INDEX NAME)



RN 117556-01-1 HCAPLUS

CN Phosphinimidic fluoride, P,P-bis(1,1-dimethylethyl)-N-phenyl- (9CI) (CA INDEX NAME)



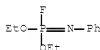
RN 117556-02-2 HCAPLUS

CN Phosphoramidimidic fluoride, N,N,P-triethyl-N'-phenyl- (9CI) (CA INDEX NAME)



RN 117556-03-3 HCAPLUS

CN Phosphorofluoridimidic acid, phenyl-, diethyl ester (9CI) (CA INDEX NAME)



CC 29-14 (Organometallic and Organometalloidal Compounds)

IT 51907-85-8P 109659-53-2P 109659-57-6P

109659-74-7P 109659-76-9P 109678-04-8P

117556-00-0P 117556-01-1P 117556-02-2P

117556-03-3P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

L26 ANSWER 11 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1988:6083 HCAPLUS Full-text

DOCUMENT NUMBER: 108:6083

ORIGINAL REFERENCE NO.: 108:1159a,1162a

TITLE: Synthesis of fluoro-λ5-monophosphazenes
andfluoro-1,3-diaza-2λ5,4λ5-diphospho
tidines by means of the Staudinger reactionAUTHOR(S): Riesel, L.; Sturm, D.; Nagel, A.; Taudien, S.;
Beuster, A.; Karwatzki, A.CORPORATE SOURCE: Sekt. Chem., Humboldt-Univ., Berlin, DDR-1040,
Ger. Dem. Rep.SOURCE: Zeitschrift fuer Anorganische und Allgemeine
Chemie (1986), 542, 157-66

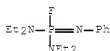
CODEN: ZAACAB; ISSN: 0044-2313

DOCUMENT TYPE: Journal

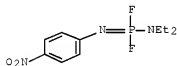
LANGUAGE: German

OTHER SOURCE(S): CASREACT 108:6083

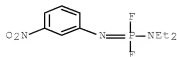
- AB Thirty-five tetrafluoro- and 2 difluorodiazadiphosphetidines as well as 4 difluoro- and 30 monofluoro- λ 5-monophosphazenes were prepared by the Staudinger reaction between trivalent phosphorus fluorides, $RnPF_3-n$ ($n = 1, 2$; $R =$ morpholino, piperidino, alkyl, (un)substituted aryl) and Ph azides, $XC_6H_4N_3$ ($X = H, 4-Me, 4-Cl, 4-Br, 4-NO_2, 3-NO_2$). PF_3 does not react with phenyl azide. The influence of substituents on the structure of the reaction products is discussed. From kinetic measurements the consts. σ_{PI} of the substituents piperidino, morpholino, and $RPhN$ ($R = Me, Et, Bu$) were determined
- IT 86601-02-7P 109659-44-1P
 109659-45-2P 109659-46-3P 109659-47-4P
 109659-48-5P 109659-49-6P 109659-50-9P
 109659-51-0P 109659-52-1P 109659-53-2P
 109659-54-3P 109659-55-4P 109659-56-5P
 109659-57-6P 109659-58-7P 109659-59-8P
 109659-60-1P 109659-61-2P 109659-62-3P
 109659-63-4P 109659-64-5P 109659-65-6P
 109659-66-7P 109659-67-8P 109659-68-9P
 109659-69-0P 109659-70-3P 109659-71-4P
 109659-72-5P 109659-73-6P 109678-04-8P
 109678-05-9P 109678-06-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
- RN 86601-02-7 HCAPLUS
- CN Phosphorodiamidimidic fluoride, N,N,N',N'-tetraethyl-N''-phenyl- (9CI) (CA INDEX NAME)



- RN 109659-44-1 HCAPLUS
- CN Phosphoramidimidic difluoride, N,N-diethyl-N'-(4-nitrophenyl)- (CA INDEX NAME)

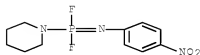


- RN 109659-45-2 HCAPLUS
- CN Phosphoramidimidic difluoride, N,N-diethyl-N'-(3-nitrophenyl)- (CA INDEX NAME)



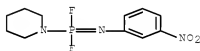
RN 109659-46-3 HCAPLUS

CN Phosphonimidic difluoride, N-(4-nitrophenyl)-P-1-piperidinyl- (CA INDEX NAME)

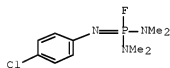


RN 109659-47-4 HCAPLUS

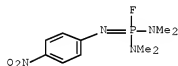
CN Phosphonimidic difluoride, N-(3-nitrophenyl)-P-1-piperidinyl- (CA INDEX NAME)



RN 109659-48-5 HCAPLUS

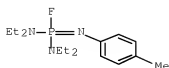
CN Phosphorodiamidimidic fluoride,
N',N',N'-tetramethyl-N''-(4-chlorophenyl)- (9CI) (CA INDEX NAME)

RN 109659-49-6 HCAPLUS

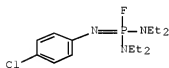
CN Phosphorodiamidimidic fluoride,
N,N,N',N'-tetramethyl-N''-(4-nitrophenyl)- (9CI) (CA INDEX NAME)

RN 109659-50-9 HCAPLUS

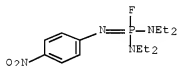
CN Phosphorodiamidimidic fluoride,
N,N,N',N'-tetraethyl-N''-(4-methylphenyl)- (9CI) (CA INDEX NAME)



RN 109659-51-0 HCAPLUS

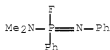
CN Phosphorodiamidimidic fluoride,
N,N,N',N'-tetraethyl-N''-(4-chlorophenyl)- (9CI) (CA INDEX NAME)

RN 109659-52-1 HCAPLUS

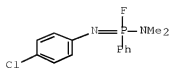
CN Phosphorodiamidimidic fluoride,
N,N,N',N'-tetraethyl-N''-(4-nitrophenyl)- (9CI) (CA INDEX NAME)

RN 109659-53-2 HCAPLUS

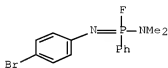
CN Phosphonamidimidic fluoride, N,N-dimethyl-N',P-diphenyl- (9CI) (CA INDEX NAME)



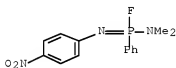
RN 109659-54-3 HCAPLUS

CN Phosphonamidimidic fluoride,
N'-(4-chlorophenyl)-N,N-dimethyl-P-phenyl- (9CI) (CA INDEX NAME)

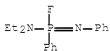
RN 109659-55-4 HCAPLUS
 CN Phosphonamidimidic fluoride,
 N'-(4-bromophenyl)-N,N-dimethyl-P-phenyl- (9CI) (CA INDEX NAME)



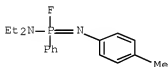
RN 109659-56-5 HCAPLUS
 CN Phosphonamidimidic fluoride,
 N,N-dimethyl-N'-(4-nitrophenyl)-P-phenyl- (9CI) (CA INDEX NAME)



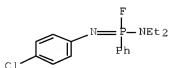
RN 109659-57-6 HCAPLUS
 CN Phosphonamidimidic fluoride, N,N-diethyl-N',P-diphenyl- (9CI) (CA INDEX NAME)



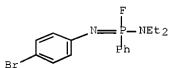
RN 109659-58-7 HCAPLUS
 CN Phosphonamidimidic fluoride,
 N,N-diethyl-N'-(4-methylphenyl)-P-phenyl- (9CI) (CA INDEX NAME)



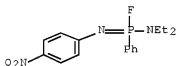
RN 109659-59-8 HCAPLUS
 CN Phosphonamidimidic fluoride,
 N'-(4-chlorophenyl)-N,N-diethyl-P-phenyl- (9CI) (CA INDEX NAME)



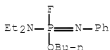
RN 109659-60-1 HCAPLUS

CN Phosphonamidimidic fluoride,
N'-(4-bromophenyl)-N,N-diethyl-P-phenyl- (9CI) (CA INDEX NAME)

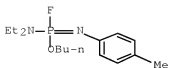
RN 109659-61-2 HCAPLUS

CN Phosphonamidimidic fluoride,
N,N-diethyl-N'-(4-nitrophenyl)-P-phenyl- (9CI) (CA INDEX NAME)

RN 109659-62-3 HCAPLUS

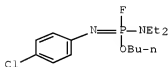
CN Phosphoramidofluoridimidic acid, N,N-diethyl-N'-phenyl-, butyl ester
(9CI) (CA INDEX NAME)

RN 109659-63-4 HCAPLUS

CN Phosphoramidofluoridimidic acid, N,N-diethyl-N'-(4-methylphenyl)-,
butyl ester (9CI) (CA INDEX NAME)

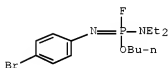
RN 109659-64-5 HCAPLUS

CN Phosphoramidofluoridimidic acid, N'-(4-chlorophenyl)-N,N-diethyl-, butyl ester (9CI) (CA INDEX NAME)



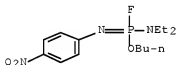
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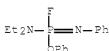
RN 109659-66-7 HCAPLUS

CN Phosphoramidofluoridimidic acid, N,N-diethyl-N'-(4-nitrophenyl)-, butyl ester (9CI) (CA INDEX NAME)



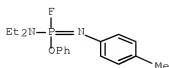
RN 109659-67-8 HCAPLUS

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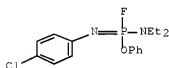
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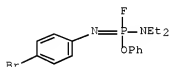
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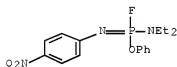
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CN Phosphoramidofluoridimidic acid, N'-(4-bromophenyl)-N,N-diethyl-, phenyl ester (9CI) (CA INDEX NAME)



RN 109659-71-4 HCAPLUS

CN Phosphoramidofluoridimidic acid, N,N-diethyl-N'-(4-nitrophenyl)-, phenyl ester (9CI) (CA INDEX NAME)



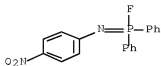
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CN Phosphinimidic fluoride, triphenyl- (9CI) (CA INDEX NAME)



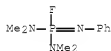
RN 109659-73-6 HCAPLUS

CN Phosphinimide fluoride, N-(4-nitrophenyl)-P,P-diphenyl- (9CI) (CA INDEX NAME)



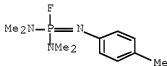
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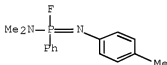
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CN Phosphorodiamidimidic fluoride, N,N,N',N'-tetramethyl-N''-(4-methylphenyl)- (9CI) (CA INDEX NAME)



RN 109678-06-0 HCAPLUS

CN Phosphonamidimidic fluoride, N,N-dimethyl-N''-(4-methylphenyl)-P-phenyl- (9CI) (CA INDEX NAME)



CC 29-7 (Organometallic and Organometalloidal Compounds)

Section cross-reference(s): 22

IT	657-97-6P	51907-85-8P	67374-25-8P	86601-02-7P
	91675-81-9P	91675-82-0P	91675-83-1P	109659-17-8P
	109659-18-9P	109659-19-0P	109659-20-3P	109659-21-4P
	109659-22-5P	109659-23-6P	109659-24-7P	109659-25-8P
	109659-26-9P	109659-28-1P	109659-29-2P	109659-30-5P
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111767-56-7P			

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS
RECORD (2 CITINGS)

L26 ANSWER 12 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1987:477931 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 107:77931

ORIGINAL REFERENCE NO.: 107:12833a,12836a

TITLE: NMR investigations of
fluorodiazadiphosphetidines and
fluoro- λ 5-monophosphazenes

AUTHOR(S): Riesel, L.; Sturm, D.; Zschunke, A.; Thomas, B.

CORPORATE SOURCE: Sekt. Chem., Humboldt-Univ., Berlin, DDR-1040,
Ger. Dem. Rep.

SOURCE: Zeitschrift fuer Anorganische und Allgemeine
Chemie (1987), 544, 225-31
CODEN: ZAACAB; ISSN: 0044-2313

DOCUMENT TYPE: Journal

LANGUAGE: German

AB The 19F and 31P NMR data of 37 fluorodiazadiphosphetidines [RR1PFNC6H4X]2 [R = amino, (un)substituted aryl; R1 = F, amino, Ph, OBU, etc.; X = H, Me, halo, NO2, etc.] and 62 fluoro- λ 5-monophosphazenes, RR1PF:NC6H4X, are submitted. In the case of tetrafluorodiazadiphosphetidines, [RPF2NC6H4X]2, an intramol. exchange of the F atoms at P is concluded from the NMR data. The influence of the substituents R and X on the NMR parameters is discussed using simple models of mol. structure.

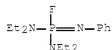
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109659-94-1 109659-95-2 109659-96-3
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 109678-04-8 109678-05-9 109678-06-0

RL: PROC (Process)
 (fluorine-19 and phosphorus-31 NMR of)

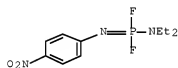
RN 86601-02-7 HCAPLUS

CN Phosphorodiamidimidic fluoride, N,N,N',N'-tetraethyl-N''-phenyl-
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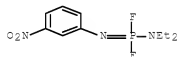
RN 109659-44-1 HCAPLUS

CN Phosphoramidimidic difluoride, N,N-diethyl-N'-(4-nitrophenyl)- (CA
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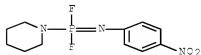
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CN Phosphoramidimidic difluoride, N,N-diethyl-N'-(3-nitrophenyl)- (CA
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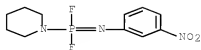
RN 109659-46-3 HCAPLUS

CN Phosphonimidic difluoride, N-(4-nitrophenyl)-P-1-piperidinyl- (CA
 INDEX NAME)

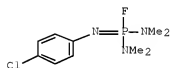


RN 109659-47-4 HCAPLUS

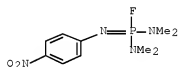
CN Phosphonimidic difluoride, N-(3-nitrophenyl)-P-1-piperidinyl- (CA
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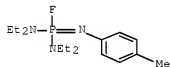
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CN Phosphorodiamidimidic fluoride,
N,N,N',N'-tetramethyl-N'-(4-chlorophenyl)- (9CI) (CA INDEX NAME)

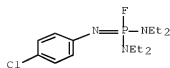
RN 109659-49-6 HCAPLUS

CN Phosphorodiamidimidic fluoride,
N,N,N',N'-tetramethyl-N'-(4-nitrophenyl)- (9CI) (CA INDEX NAME)

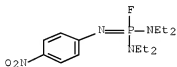
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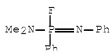
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CN Phosphorodiamidimidic fluoride,
N,N,N',N'-tetraethyl-N'-(4-chlorophenyl)- (9CI) (CA INDEX NAME)

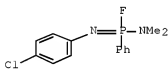
RN 109659-52-1 HCAPLUS
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 N,N,N',N'-tetraethyl-N'-(4-nitrophenyl)- (9CI) (CA INDEX NAME)



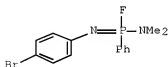
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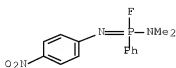
RN 109659-54-3 HCAPLUS
 CN Phosphonamidimidic fluoride,
 N'-(4-chlorophenyl)-N,N-dimethyl-P-phenyl- (9CI) (CA INDEX NAME)



RN 109659-55-4 HCAPLUS
 CN Phosphonamidimidic fluoride,
 N'-(4-bromophenyl)-N,N-dimethyl-P-phenyl- (9CI) (CA INDEX NAME)

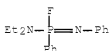


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 CN Phosphonamidimidic fluoride,
 N,N-dimethyl-N'-(4-nitrophenyl)-P-phenyl- (9CI) (CA INDEX NAME)

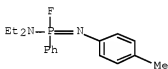


RN 109659-57-6 HCAPLUS

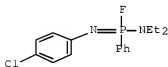
CN Phosphonamidimidic fluoride, N,N-diethyl-N',P-diphenyl- (9CI) (CA INDEX NAME)



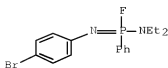
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CN Phosphonamidimidic fluoride,
N,N-diethyl-N'-(4-methylphenyl)-P-phenyl- (9CI) (CA INDEX NAME)

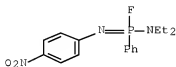
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CN Phosphonamidimidic fluoride,
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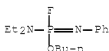
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CN Phosphonamidimidic fluoride,
N'-(4-bromophenyl)-N,N-diethyl-P-phenyl- (9CI) (CA INDEX NAME)

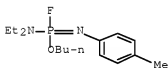
RN 109659-61-2 HCAPLUS

CN Phosphoramididimic fluoride,
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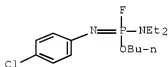
RN 109659-62-3 HCAPLUS

CN Phosphoramidofluoridimic acid, N,N-diethyl-N'-phenyl-, butyl ester
(9CI) (CA INDEX NAME)

RN 109659-63-4 HCAPLUS

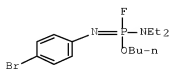
CN Phosphoramidofluoridimic acid, N,N-diethyl-N'-(4-methylphenyl)-,
butyl ester (9CI) (CA INDEX NAME)

RN 109659-64-5 HCAPLUS

CN Phosphoramidofluoridimic acid, N'-(4-chlorophenyl)-N,N-diethyl-,
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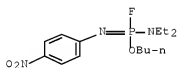
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CN Phosphoramidofluoridimic acid, N'-(4-bromophenyl)-N,N-diethyl-,
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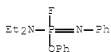
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CN Phosphoramidofluoridimidic acid, N,N-diethyl-N'-(4-nitrophenyl)-, butyl ester (9CI) (CA INDEX NAME)



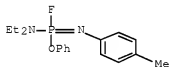
RN 109659-67-8 HCAPLUS

CN Phosphoramidofluoridimidic acid, N,N-diethyl-N'-phenyl-, phenyl ester (9CI) (CA INDEX NAME)



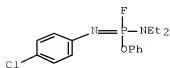
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CN Phosphoramidofluoridimidic acid, N,N-diethyl-N'-(4-methylphenyl)-, phenyl ester (9CI) (CA INDEX NAME)



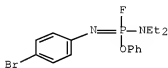
RN 109659-69-0 HCAPLUS

CN Phosphoramidofluoridimidic acid, N'-(4-chlorophenyl)-N,N-diethyl-, phenyl ester (9CI) (CA INDEX NAME)



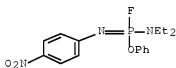
RN 109659-70-3 HCAPLUS

CN Phosphoramidofluoridimidic acid, N'-(4-bromophenyl)-N,N-diethyl-, phenyl ester (9CI) (CA INDEX NAME)



RN 109659-71-4 HCAPLUS

CN Phosphoramidofluoridimidic acid, N,N-diethyl-N'-(4-nitrophenyl)-, phenyl ester (9CI) (CA INDEX NAME)



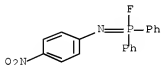
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CN Phosphinimidic fluoride, triphenyl- (9CI) (CA INDEX NAME)



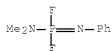
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CN Phosphinimidic fluoride, N-(4-nitrophenyl)-P,P-diphenyl- (9CI) (CA INDEX NAME)



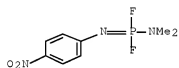
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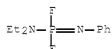
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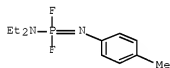
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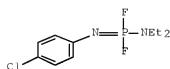
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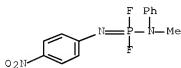


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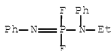
CN Phosphoramidimidic difluoride, N'-(4-chlorophenyl)-N,N-diethyl- (CA INDEX NAME)



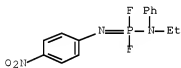
RN 109659-79-2 HCAPLUS

CN Phosphoramidimidic difluoride, N-methyl-N'-(4-nitrophenyl)-N-phenyl-
(CA INDEX NAME)

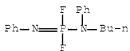
RN 109659-80-5 HCAPLUS

CN Phosphoramidimidic difluoride, N-ethyl-N,N'-diphenyl- (CA INDEX
NAME)

RN 109659-81-6 HCAPLUS

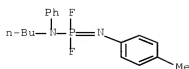
CN Phosphoramidimidic difluoride, N-ethyl-N'-(4-nitrophenyl)-N-phenyl-
(CA INDEX NAME)

RN 109659-82-7 HCAPLUS

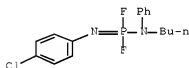
CN Phosphoramidimidic difluoride, N-butyl-N,N'-diphenyl- (CA INDEX
NAME)

RN 109659-83-8 HCAPLUS

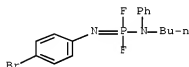
CN Phosphoramidimidic difluoride, N-butyl-N'-(4-methylphenyl)-N-phenyl-
(CA INDEX NAME)



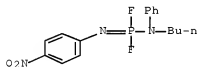
RN 109659-84-9 HCAPLUS

CN Phosphoramididic difluoride, N-butyl-N'-(4-chlorophenyl)-N-phenyl-
(CA INDEX NAME)

RN 109659-85-0 HCAPLUS

CN Phosphoramididic difluoride, N'-(4-bromophenyl)-N-butyl-N-phenyl-
(CA INDEX NAME)

RN 109659-86-1 HCAPLUS

CN Phosphoramididic difluoride, N-butyl-N'-(4-nitrophenyl)-N-phenyl-
(CA INDEX NAME)

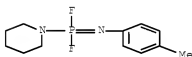
RN 109659-87-2 HCAPLUS

CN Phosphonimidic difluoride, N-phenyl-P-1-piperidinyl- (CA INDEX
NAME)



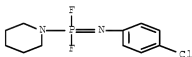
RN 109659-88-3 HCAPLUS

CN Phosphonimidic difluoride, N-(4-methylphenyl)-P-1-piperidinyl- (CA INDEX NAME)



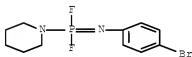
RN 109659-89-4 HCAPLUS

CN Phosphonimidic difluoride, N-(4-chlorophenyl)-P-1-piperidinyl- (CA INDEX NAME)



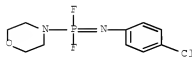
RN 109659-90-7 HCAPLUS

CN Phosphonimidic difluoride, N-(4-bromophenyl)-P-1-piperidinyl- (CA INDEX NAME)



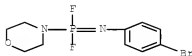
RN 109659-91-8 HCAPLUS

CN Phosphonimidic difluoride, N-(4-chlorophenyl)-P-4-morpholinyl- (CA INDEX NAME)



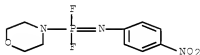
RN 109659-92-9 HCAPLUS

CN Phosphonimidic difluoride, N-(4-bromophenyl)-P-4-morpholinyl- (CA INDEX NAME)



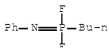
RN 109659-93-0 HCAPLUS

CN Phosphonimidic difluoride, P-4-morpholinyl-N-(4-nitrophenyl)- (CA INDEX NAME)



RN 109659-94-1 HCAPLUS

CN Phosphonimidic difluoride, P-butyl-N-phenyl- (CA INDEX NAME)



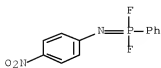
RN 109659-95-2 HCAPLUS

CN Phosphonimidic difluoride, diphenyl- (9CI) (CA INDEX NAME)



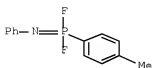
RN 109659-96-3 HCAPLUS

CN Phosphonimidic difluoride, N-(4-nitrophenyl)-P-phenyl- (CA INDEX NAME)



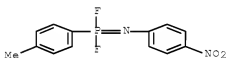
RN 109659-97-4 HCAPLUS

CN Phosphonimidic difluoride, P-(4-methylphenyl)-N-phenyl- (CA INDEX NAME)



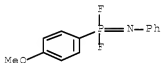
RN 109659-98-5 HCAPLUS

CN Phosphonimidic difluoride, P-(4-methylphenyl)-N-(4-nitrophenyl)- (CA INDEX NAME)



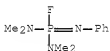
RN 109659-99-6 HCAPLUS

CN Phosphonimidic difluoride, P-(4-methoxyphenyl)-N-phenyl- (CA INDEX NAME)



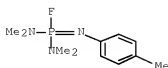
RN 109678-04-8 HCAPLUS

CN Phosphorodiamidimidic fluoride, N,N,N',N'-tetramethyl-N''-phenyl- (9CI) (CA INDEX NAME)

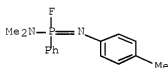


RN 109678-05-9 HCAPLUS

CN Phosphorodiamidimidic fluoride, N,N,N',N'-tetramethyl-N''-(4-methylphenyl)- (9CI) (CA INDEX NAME)



RN 109678-06-0 HCAPLUS
 CN Phosphonamidimidic fluoride,
 N,N-dimethyl-N'-(4-methylphenyl)-P-phenyl- (9CI) (CA INDEX NAME)

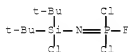


CC 29-7 (Organometallic and Organometalloidal Compounds)
 IT 15199-01-6 67374-25-8 86601-02-7 91675-82-0
 91675-83-1 109659-17-8 109659-18-9 109659-19-0 109659-20-3
 109659-21-4 109659-22-5 109659-23-6 109659-24-7 109659-25-8
 109659-26-9 109659-27-0 109659-28-1 109659-29-2 109659-30-5
 109659-31-6 109659-32-7 109659-33-8 109659-34-9 109659-35-0
 109659-36-1 109659-37-2 109659-38-3 109659-39-4 109659-40-7
 109659-41-8 109659-42-9 109659-43-0 109659-44-1
 109659-45-2 109659-46-3 109659-47-4
 109659-48-5 109659-49-6 109659-50-9
 109659-51-0 109659-52-1 109659-53-2
 109659-54-3 109659-55-4 109659-56-5
 109659-57-6 109659-58-7 109659-59-8
 109659-60-1 109659-61-2 109659-62-3
 109659-63-4 109659-64-5 109659-65-6
 109659-66-7 109659-67-8 109659-68-9
 109659-69-0 109659-70-3 109659-71-4
 109659-72-5 109659-73-6 109659-74-7
 109659-75-8 109659-76-9 109659-77-0
 109659-78-1 109659-79-2 109659-80-5
 109659-81-6 109659-82-7 109659-83-8
 109659-84-9 109659-85-0 109659-86-1
 109659-87-2 109659-88-3 109659-89-4
 109659-90-7 109659-91-8 109659-92-9
 109659-93-0 109659-94-1 109659-95-2
 109659-96-3 109659-97-4 109659-98-5
 109659-99-6 109660-00-6 109660-01-7 109678-00-4
 109678-01-5 109678-02-6 109678-03-7 109678-04-8
 109678-05-9 109678-06-0 109713-73-7
 109717-51-3
 RL: PROC (Process)
 (fluorine-19 and phosphorus-31 NMR of)

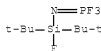
L26 ANSWER 13 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1987:176476 HCAPLUS [Full-text](#)
 DOCUMENT NUMBER: 106:176476
 ORIGINAL REFERENCE NO.: 106:28649a,28652a
 TITLE: N-(Halosilyl)phosphinimines: novel

chlorine-fluorine exchange
 Kliebisch, U.; Klingebiel, U.
 AUTHOR(S): Inst. Anorg. Chemie, Univ. Goettingen,
 CORPORATE SOURCE: Goettingen, D-3400, Fed. Rep. Ger.
 SOURCE: Journal of Organometallic Chemistry (1986), 314(1-2), 33-8
 CODEN: JORCAI; ISSN: 0022-328X
 DOCUMENT TYPE: Journal
 LANGUAGE: German
 OTHER SOURCE(S): CASREACT 106:176476

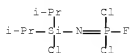
AB (Me₃C)2SiF₂NH₂ reacts with PX₅ (X = Cl, F) in a molar ratio 2:1 via fluorosilylaminophosphoranes to give fluorosilylphosphinimines (Me₃C)2SiFN:PX₃ [X = Cl, F (I)]. I is converted to (Me₃C)2SiClN:PCl₂F (II) in a chloro-fluoro exchange. After the reaction of (Me₂CH)2SiF₂NH₂ with PCl₅, (Me₂CH)2SiClN:PCl₂F is isolated. Substitution at the P atom occurs in the reaction of II with alcohols and silylamines.
 2-Silylimino-1,3-diaza-2λ⁵-phospha-4-silacyclobutanes result from the reaction of II with (LiCMe₃)2SiMe₂.
 IT 107996-28-1P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
 RACT (Reactant or reagent)
 (preparation and reactions of)
 RN 107996-28-1 HCAPLUS
 CN Phosphorimidic dichloride fluoride,
 [chlorobis(1,1-dimethylethyl)silyl]- (9CI) (CA INDEX NAME)



IT 107996-26-9P 107996-29-2P
 107996-30-5P 107996-31-6P 107996-32-7P
 107996-34-9P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 107996-26-9 HCAPLUS
 CN Phosphorimidic trifluoride, [bis(1,1-dimethylethyl)fluorosilyl]-
 (9CI) (CA INDEX NAME)

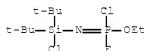


RN 107996-29-2 HCAPLUS
 CN Phosphorimidic dichloride fluoride, [chlorobis(1-methylethyl)silyl]-
 (9CI) (CA INDEX NAME)



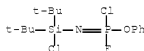
RN 107996-30-5 HCAPLUS

CN Phosphorochloridofluoridimidic acid,
[chlorobis(1,1-dimethylethyl)silyl]-, ethyl ester (9CI) (CA INDEX
NAME)



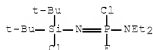
RN 107996-31-6 HCAPLUS

CN Phosphorochloridofluoridimidic acid,
[chlorobis(1,1-dimethylethyl)silyl]-, phenyl ester (9CI) (CA INDEX
NAME)



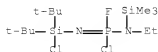
RN 107996-32-7 HCAPLUS

CN Phosphoramidimidic chloride fluoride,
N'-[chlorobis(1,1-dimethylethyl)silyl]-N,N-diethyl- (9CI) (CA INDEX
NAME)



RN 107996-34-9 HCAPLUS

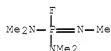
CN Phosphoramidimidic chloride fluoride,
N'-[chlorobis(1,1-dimethylethyl)silyl]-N-ethyl-N-(trimethylsilyl)-
(9CI) (CA INDEX NAME)



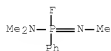
CC 29-6 (Organometallic and Organometalloidal Compounds)
 IT 107996-28-1P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
 RACT (Reactant or reagent)
 (preparation and reactions of)
 IT 107996-26-9P 107996-29-2P
 107996-30-5P 107996-31-6P 107996-32-7P
 107996-33-8P 107996-34-9P 107996-35-0P 107996-36-1P
 107996-37-2P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS
 RECORD (1 CITINGS)

L26 ANSWER 14 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1986:609025 HCAPLUS Full-text
 DOCUMENT NUMBER: 105:209025
 ORIGINAL REFERENCE NO.: 105:33711a,33714a
 TITLE: Thermal dealkylation of
 (alkylamino)fluorophosphonium halides
 AUTHOR(S): Marchenko, A. P.; Kudryavtsev, A. A.; Tsymbal,
 I. F.; Pinchuk, A. M.
 CORPORATE SOURCE: Inst. Org. Khim., Kiev, USSR
 SOURCE: Zhurnal Obshchei Khimii (1985),
 55(11), 2627-8
 CODEN: ZOKHA4; ISSN: 0044-460X
 DOCUMENT TYPE: Journal
 LANGUAGE: Russian
 OTHER SOURCE(S): CASREACT 105:209025

AB Me2NP+P(NMeR)R1 X- (I; R = Me; R1 = NMe2, Ph; X = Br) were reversibly
 dealkylated at 290-300° to give Me2NPF(:NR)R1. I (R = SO2Ph, R1 = NMe2, X =
 Cl) was irreversibly dealkylated at 79° to give (Me2N)2PF:NSO2Ph.
 IT 7549-84-0P
 RL: PREP (Preparation)
 (formation and reaction with benzenesulfonyl chloride)
 RN 7549-84-0 HCAPLUS
 CN Phosphorodiamidimidic fluoride, pentamethyl- (7CI, 8CI, 9CI) (CA
 INDEX NAME)

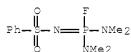


IT 105263-83-0P 105263-84-1P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 105263-83-0 HCAPLUS
 CN Phosphonamidimidic fluoride, N,N,N'-trimethyl-P-phenyl- (9CI) (CA
 INDEX NAME)



RN 105263-84-1 HCAPLUS

CN Benzenesulfonamide, N-[bis(dimethylamino)fluorophosphinylidene]-
(CA INDEX NAME)



CC 29-7 (Organometallic and Organometalloidal Compounds)

IT 7549-84-0P

RL: PREP (Preparation)

(formation and reaction with benzenesulfonyl chloride)

IT 105263-83-0P 105263-84-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

L26 ANSWER 15 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1983:470842 HCAPLUS Full-text

DOCUMENT NUMBER: 99:70842

ORIGINAL REFERENCE NO.: 99:11011a,11014a

TITLE: Diamidofluorophosphazo compounds

AUTHOR(S): Marchenko, A. P.; Kovenya, V. A.; Pinchuk, A. M.

CORPORATE SOURCE: Inst. Org. Khim., Kiev, USSR

SOURCE: Zhurnal Obshchei Khimii (1983), 53(3),

698-9

CODEN: ZOKHA4; ISSN: 0044-460X

DOCUMENT TYPE:

Journal

LANGUAGE:

Russian

OTHER SOURCE(S): CASREACT 99:70842

AB Fluorination of (R2N)2P(Cl):NR1 [R = R1 = Et, Pr, Bu; R = Et, R1 = Ph; R2N = EtPhN, R1 = Ph; R2N = piperidino, R1 = (CH2)3CH:CH2] with HF gave (R2N)2P(F):NR1.

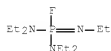
IT 86600-99-9P 86601-00-5P 86601-01-6P

86601-02-7P 86601-03-8P 86601-04-9P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

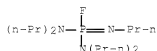
RN 86600-99-9 HCAPLUS

CN Phosphorodiamidimidic fluoride, pentaethyl- (9CI) (CA INDEX NAME)



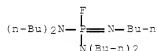
RN 86601-00-5 HCAPLUS

CN Phosphorodiamidimidic fluoride, pentapropyl- (9CI) (CA INDEX NAME)



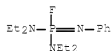
RN 86601-01-6 HCAPLUS

CN Phosphorodiamidimidic fluoride, pentabutyl- (9CI) (CA INDEX NAME)



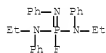
RN 86601-02-7 HCAPLUS

CN Phosphorodiamidimidic fluoride, N,N,N',N'-tetraethyl-N''-phenyl-
(9CI) (CA INDEX NAME)



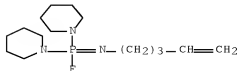
RN 86601-03-8 HCAPLUS

CN Phosphorodiamidimidic fluoride, N,N'-diethyl-N,N',N''-triphenyl-
(9CI) (CA INDEX NAME)



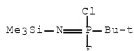
RN 86601-04-9 HCAPLUS

CN Phosphinimidic fluoride, N-4-pentenyl-P,P-di-1-piperidinyl- (9CI)
(CA INDEX NAME)

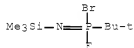


CC 29-7 (Organometallic and Organometalloidal Compounds)
IT 86600-99-9P 86601-00-5P 86601-01-6P
86601-02-7P 86601-03-8P 86601-04-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

L26 ANSWER 16 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1982:544933 HCAPLUS [Full-text](#)
DOCUMENT NUMBER: 97:144933
ORIGINAL REFERENCE NO.: 97:24145a,24148a
TITLE: Phosphazo compounds with different halogens at
the phosphorus atom
AUTHOR(S): Gololobov, Yu. G.; Gusar, N. I.; Randina, L. V.
CORPORATE SOURCE: Inst. Org. Khim., Kiev, USSR
SOURCE: Zhurnal Obshchei Khimii (1982), 52(6),
1260-5
CODEN: ZOKHA4; ISSN: 0044-460X
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 97:144933
AB Reaction of Me3CPR2 (R = Cl, Br, F) with NaN(SiMe3)2 gave R(Me3C)PN(SiMe3)2
which on halogenation gave 38-73% RR1(Me3C)P:NSiMe3 (R1 = Cl, Br, iodo).
IT 83128-25-0P 83128-26-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 83128-25-0 HCAPLUS
CN Phosphonimidic chloride fluoride,
P-(1,1-dimethylethyl)-N-(trimethylsilyl)- (9CI) (CA INDEX NAME)



RN 83128-26-1 HCAPLUS
CN Phosphonimidic bromide fluoride,
P-(1,1-dimethylethyl)-N-(trimethylsilyl)- (9CI) (CA INDEX NAME)

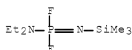


CC 29-7 (Organometallic and Organometalloidal Compounds)
IT 83128-22-7P 83128-23-8P 83128-24-9P 83128-25-0P
83128-26-1P 83128-27-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS
RECORD (3 CITINGS)

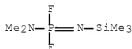
L26 ANSWER 17 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1982:6805 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 96:6805
 ORIGINAL REFERENCE NO.: 96:1239a,1242a
 TITLE: Fluorophosphazosilanes
 AUTHOR(S): Filonenko, L. P.; Kudryavtsev, A. A.; Pinchuk, A. M.
 CORPORATE SOURCE: USSR
 SOURCE: Zhurnal Obshchei Khimii (1981), 51(9), 1971-5
 CODEN: ZOKHA4; ISSN: 0044-460X
 DOCUMENT TYPE: Journal
 LANGUAGE: Russian
 OTHER SOURCE(S): CASREACT 96:6805

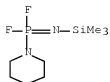
AB The title compds. $\text{RnPF}_3\text{-n:NSiMe}_3$ (I, R = alkoxy, dialkylamino, n = 1, 2) were prepared in 34-62% yields by treating $(\text{Me}_3\text{Si})_2\text{NCl}$ with $\text{RnPF}_3\text{-n}$. Treating $\text{Et}_2\text{NPF}_2\text{:NSiMe}_3$ (II) with SiCl_4 gave 86% $\text{Et}_2\text{NPF}_2\text{:NSiCl}_3$, whereas use of PCl_3 gave 73% $\text{Et}_2\text{NPF}_2\text{:NPCl}_2$ and use of POCl_3 gave 62% $\text{Et}_2\text{NPF}_2\text{:NPOCl}_2$; addition of HF gave quant. $\text{Et}_2\text{NPF}_3\text{NHSiMe}_3$.
 IT 80156-02-1P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and reactions of)
 RN 80156-02-1 HCAPLUS
 CN Phosphoramidimidic difluoride, N,N-diethyl-N'-(trimethylsilyl)- (CA INDEX NAME)



IT 61701-84-6P 80156-03-2P 80156-04-3P
 80156-05-4P 80156-06-5P 80156-07-6P
 80156-08-7P 80156-09-8P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 61701-84-6 HCAPLUS
 CN Phosphoramidimidic difluoride, N,N-dimethyl-N'-(trimethylsilyl)- (CA INDEX NAME)

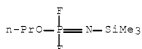


RN 80156-03-2 HCAPLUS
 CN Phosphonimidic difluoride, P-1-piperidinyl-N-(trimethylsilyl)- (CA INDEX NAME)



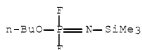
RN 80156-04-3 HCAPLUS

CN Phosphorodifluoridimidic acid, (trimethylsilyl)-, propyl ester (9CI)
(CA INDEX NAME)



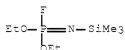
RN 80156-05-4 HCAPLUS

CN Phosphorodifluoridimidic acid, (trimethylsilyl)-, butyl ester (9CI)
(CA INDEX NAME)



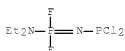
RN 80156-06-5 HCAPLUS

CN Phosphorodifluoridimidic acid, (trimethylsilyl)-, diethyl ester (9CI)
(CA INDEX NAME)



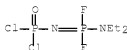
RN 80156-07-6 HCAPLUS

CN Phosphoramidimidic difluoride, N'-(dichlorophosphino)-N,N-diethyl-
(CA INDEX NAME)



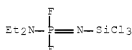
RN 80156-08-7 HCAPLUS

CN Phosphoramidic dichloride, [(diethylamino)difluorophosphoranylidene]-(9CI) (CA INDEX NAME)



RN 80156-09-8 HCAPLUS

CN Phosphoramidimidic difluoride, N,N-diethyl-N'-(trichlorosilyl)- (CA INDEX NAME)



CC 29-7 (Organometallic and Organometalloidal Compounds)

IT 80156-02-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
 RACT (Reactant or reagent)
 (preparation and reactions of)

IT 61701-84-6P 80156-03-2P 80156-04-3P

80156-05-4P 80156-06-5P 80156-07-6P

80156-08-7P 80156-09-8P 80156-10-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

L26 ANSWER 18 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1981:71918 HCAPLUS Full-text

DOCUMENT NUMBER: 94:71918

ORIGINAL REFERENCE NO.: 94:11619a,11622a

TITLE: Conformational analysis of substituted
 phosphinylimidodiphosphoranes [X3PNP(O)X2] and
 (X3PNPX3)+ for X = hydrogen, fluorine, chlorine,
 methyl by the PCIL0 method

AUTHOR(S): Glidewell, Christopher

CORPORATE SOURCE: Chem. Dep., Univ. St. Andrews, St. Andrews/Fife,
 KY16 9ST, UK

SOURCE: Journal of Molecular Structure (1980),
 69, 265-72

CODEN: JMOSB4; ISSN: 0022-2860

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Conformational energy maps were calculated, using the PCIL0 method, for X3PNP(O)X2 and (X3PNPX3)+ for X = H, F, Cl, CH3 as a function of the PNP angle. In H3PNP(O)H2 the global energy min. corresponds to the eclipsed conformation of the H3P and P(O)H2 fragments for all PNP angles, while in Cl3PNP(O)Cl2, the global min. always has Cl3P and P(O)Cl2 staggered: the global min. in F3PNP(O)F2 corresponds to eclipsed F3P and P(O)F2 fragments at low PNP angles and staggered fragments at high PNP angles: in (CH3)3PNP(O)(CH3)2 the global min. conformation is very sensitive to \angle PNP. Subordinate energy min. occur for all X3PNP(O)X2 species: in particular, there are two local

conformational min. for Cl3PNP(O)Cl2 at the optimum value of \angle PNP, and the relative energies of the three stable conformations are in good agreement with those derivable from the 31P NMR spectrum of this compound. In (X3PNPX3)+ the global min. is always close to the eclipsed conformation: free rotation of the X3P groups relative to one another is approached in each (X3PNPX3)+ ion as \angle PNP approaches 180°. The conformations of the transition states for the equilibrium between energy min. are reported with their relative energies, for X3PNP(O)X2 (X = H, F, Cl, CH3) and for (Cl3PNPCl3)+.

IT 22474-63-1 76554-10-4
 RL: PROC (Process)
 (conformational anal. of, by PCILO method)
 RN 22474-63-1 HCAPLUS
 CN Phosphorimidic trifluoride, (difluorophosphinyl)- (8CI, 9CI) (CA INDEX NAME)



RN 76554-10-4 HCAPLUS
 CN Phosphorus(1+), trifluoro(phosphorimidic trifluoridato-N)-, (T-4)- (9CI) (CA INDEX NAME)

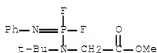


CC 65-4 (General Physical Chemistry)
 IT 13966-08-0 22474-63-1 34768-11-1 76554-08-0
 76554-10-4 76554-11-5 76554-12-6 76554-15-9
 RL: PROC (Process)
 (conformational anal. of, by PCILO method)
 OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

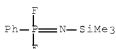
L26 ANSWER 19 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1980:146680 HCAPLUS Full-text
 DOCUMENT NUMBER: 92:146680
 ORIGINAL REFERENCE NO.: 92:23841a,23844a
 TITLE: Prototropic isomerization of fluorophosphazone compounds to fluorophosphoranes
 AUTHOR(S): Nesterova, L. I.; Gololobov, Yu. G.
 CORPORATE SOURCE: USSR
 SOURCE: Zhurnal Obshchei Khimii (1979), 49(11), 2625-7
 CODEN: ZOKHA4; ISSN: 0044-460X
 DOCUMENT TYPE: Journal
 LANGUAGE: Russian
 OTHER SOURCE(S): CASREACT 92:146680
 GI



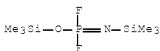
- AB Treatment of F2PNMeCH2CO2Et with PhN3 in C6H6 at 80° gave 23% oxazaphospholene I. Similar reaction with F2PN(CMe3)CH2CO2Me gave 21% PhN:PF2NRCH2CO2Me (II; R = CMe3). I was formed by isomerization of II (R = Me). When R = CMe3 II could not cyclize under the reaction conditions.
- IT 73030-77-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
- RN 73030-77-0 HCAPLUS
- CN Glycine, N-(1,1-difluoro-N-phenylphosphinimyl)-N-(1,1-dimethylethyl)-, methyl ester (9CI) (CA INDEX NAME)



- CC 28-11 (Heterocyclic Compounds (More Than One Hetero Atom))
 Section cross-reference(s): 25
- IT 73030-75-8P 73030-77-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
- L26 ANSWER 20 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN
- ACCESSION NUMBER: 1978:459932 HCAPLUS Full-text
- DOCUMENT NUMBER: 89:59932
- ORIGINAL REFERENCE NO.: 89:9305a,9308a
- TITLE: Structural isomerization of
 (bis(trimethylsilyl)amino)phosphine oxides
- AUTHOR(S): Neilson, Robert H.; Jacobs, Richard D.;
 Scheirman, Russell W.; Wilburn, James C.
- CORPORATE SOURCE: Paul M. Gross Chem. Lab., Duke Univ., Durham,
 NC, USA
- SOURCE: Inorganic Chemistry (1978), 17(7),
 1880-2
- CODEN: INOCAJ; ISSN: 0020-1669
- DOCUMENT TYPE: Journal
- LANGUAGE: English
- AB The reactions of lithium bis(trimethylsilyl)amide with phosphoryl chlorides ClP(O)X2 (X = F, Cl, Ph) gave the N-silylated phosphinimines Me3SiN:PX2OSiMe3 rather than the isomeric phosphine oxides (Me2Si)2NP(O)X2. Stereochem. arguments and 13C NMR data provide support for the assignment of the imine structure.
- IT 61701-83-5
 RL: PRP (Properties)
 (NMR of)
- RN 61701-83-5 HCAPLUS
- CN Phosphonimidic difluoride, P-phenyl-N-(trimethylsilyl)- (CA INDEX NAME)



IT 66416-57-7P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 66416-57-7 HCAPLUS
 CN Phosphorodifluoridimidic acid, (trimethylsilyl)-, trimethylsilyl
 ester (9CI) (CA INDEX NAME)



CC 29-6 (Organometallic and Organometalloidal Compounds)
 IT 61701-83-5
 RL: PRP (Properties)
 (NMR of)
 IT 41309-94-8P 66416-57-7P 66416-58-8P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

L26 ANSWER 21 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1977:501818 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 87:101818

ORIGINAL REFERENCE NO.: 87:16151a

TITLE: Conformational analysis of phosphazenes. A
 force field for the calculation of the molecular
 structures of halophosphazenes

AUTHOR(S): Boyd, Richard H.; Kesner, Laya

CORPORATE SOURCE: Dep. Mater. Sci. Eng., Univ. Utah, Salt Lake
 City, UT, USA

SOURCE: Journal of the American Chemical Society (
 1977), 99(13), 4248-56

CODEN: JACSAT; ISSN: 0002-7863

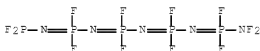
DOCUMENT TYPE: Journal

LANGUAGE: English

AB Phosphazenes (-N:PR2-n) are a series of compds. that include rings of various
 sizes and conformations and linear high-mol.-weight polymers which the formal
 valence structure presents the possibility of π -electron delocalization. An
 attempt was made to see if phosphazene properties could be accounted for in
 terms of a conventional conformational model in which the mols. are subject to
 the influences of the energetics of bond twisting, bending, and stretching
 (and nonbonded interactions), but in which there are not further effects on
 bonding in various size mols. than from these sources (i.e., the individual
 bond energies do not depend on the size of the mol.). The geometries,
 energies, and vibrational frequencies of a number of cyclic
 perhalophosphazenes were satisfactorily accounted for by such a model. A
 force field for conformational calcns. on chloro- and fluorophosphazenes is

presented. Important and necessary features of the model include a 2-fold torsional potential with a low barrier (.apprx.1.4 kcal/mol) and a soft bending constant at the PNP valence angle (both absolutely and relative to the NPN angle).

IT 63722-42-9
 RL: PRP (Properties)
 (conformation of, calcn. of)
 RN 63722-42-9 HCAPLUS
 CN Phosphoramidimidic difluoride,
 N-[[[(difluoroamino)difluorophosphoranylidene]amino]difluorophosphor
 anylidene]-N'-(N-(difluorophosphino)-P,P-difluorophosphinimyl]-
 (9CI) (CA INDEX NAME)



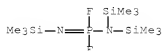
CC 22-9 (Physical Organic Chemistry)
 IT 940-71-6 2950-45-0 13596-41-3 14700-00-6 15599-91-4
 63722-41-8 63722-42-9
 RL: PRP (Properties)
 (conformation of, calcn. of)
 OS.CITING REF COUNT: 12 THERE ARE 12 CAPLUS RECORDS THAT CITE THIS
 RECORD (13 CITINGS)

L26 ANSWER 22 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1977:406082 HCAPLUS Full-text
 DOCUMENT NUMBER: 87:6082
 ORIGINAL REFERENCE NO.: 87:989a,992a
 TITLE: Reactions of lithium bis(trimethylsilyl) amide
 with some fluorophosphoranes
 AUTHOR(S): Wisian-Neilson, Patty; Neilson, Robert H.;
 Cowley, Alan H.
 CORPORATE SOURCE: Dep. Chem., Duke Univ., Durham, NC, USA
 SOURCE: Inorganic Chemistry (1977), 16(6),
 1460-3
 CODEN: INOCAJ; ISSN: 0020-1669
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB The reactions of various fluorophosphoranes with LiN(SiMe₃)₂ proceeded with elimination of both LiF and Me₃SiF to produce N-trimethylsilyl phosphinimines rather than bis(trimethylsilyl)aminophosphoranes. Thus, the reaction with PF₅ afforded (Me₃Si)₂N:PF₂NSiMe₃ while the substituted fluorophosphoranes RPF₄ (R = Ph, NMe₂, Me) and Ph₂PF₃ gave rise to simpler N-trimethylsilylphosphinimines, FPR(R₁):NSiMe₃ (R = F, R₁ = Ph; R = F, R₁ = NMe₂; R = F, R₁ = Me; R = R₁ = Ph). Under similar conditions, LiN(SiMe₃)₂ did not react with (Me₂N)₂PF₃. In the case of Me₂PF₃ only decomposition products of the expected phosphinimine Me₂PF:NSiMe₃ were detected. These p-fluoro-N-trimethylsilylphosphinimines undergo thermal decomposition, eliminating Me₃SiF and forming cyclic phosphazenes.

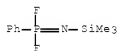
IT 58972-02-4P 61701-83-5P 61701-84-6P
 61701-85-7P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 58972-02-4 HCAPLUS
 CN Phosphoramidimidic difluoride, tris(trimethylsilyl)- (9CI) (CA

INDEX NAME)



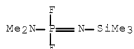
RN 61701-83-5 HCAPLUS

CN Phosphoramidimide difluoride, P-phenyl-N-(trimethylsilyl)- (CA INDEX NAME)



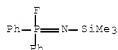
RN 61701-84-6 HCAPLUS

CN Phosphoramidimide difluoride, N,N-dimethyl-N'-(trimethylsilyl)- (CA INDEX NAME)



RN 61701-85-7 HCAPLUS

CN Phosphinimidic fluoride, P,P-diphenyl-N-(trimethylsilyl)- (9CI) (CA INDEX NAME)



CC 29-7 (Organometallic and Organometalloidal Compounds)

IT 33310-82-6P 58972-02-4P 61701-83-5P

61701-84-6P 61701-85-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)OS.CITING REF COUNT: 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS
RECORD (10 CITINGS)

L26 ANSWER 23 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1976:405796 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 85:5796

ORIGINAL REFERENCE NO.: 85:935a,938a

TITLE: Derivatives of perfluoroalkylsulfonic acids.

II. Oxidative imination of phosphorus(III) compounds by nitrogenous derivatives of trifluoromethanesulfonic acid
Radchenko, O. A.; Nazaretyan, V. P.; Yagupol'skii, L. M.

CORPORATE SOURCE: Inst. Org. Khim., Kiev, USSR
SOURCE: Zhurnal Obshchei Khimii (1976), 46(3), 565-8

DOCUMENT TYPE: Journal
LANGUAGE: Russian
CODEN: ZOKHA4; ISSN: 0044-460X

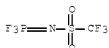
AB The quantitative reaction of F3CSO2N3 with (RO)3P gave F3CSO2N:P(OR)3 (R = Ph, hexyl), with PhPCl2 gave F3CSO2N:PCl2Ph, and with Ph3Sb gave F3CSO2N:SbPh3. Similarly, the reaction of F3CSO2NNaCl with PX3 gave, resp., 89% and 31% F3CSO2N:PX3 (X = Cl, Br). F3CSO2NNaCl and F3PCl2 gave 51% F3CSO2N:PF3.

IT 59360-43-9P

RL: SPN (Synthetic preparation); PREP (Preparation of)
(preparation of)

RN 59360-43-9 HCAPLUS

CN Methanesulfonamide, 1,1,1-trifluoro-N-(trifluorophosphoranylidene)-
(CA INDEX NAME)



CC 29-7 (Organometallic and Organometalloidal Compounds)

IT 30227-07-7P 31646-22-7P 59360-41-7P 59360-42-8P
59360-43-9P 59360-44-0P 59360-45-1P 59360-46-2P
59360-47-3P

RL: SPN (Synthetic preparation); PREP (Preparation of)
(preparation of)

OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS
RECORD (5 CITINGS)

L26 ANSWER 24 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1976:164942 HCAPLUS Full-text

DOCUMENT NUMBER: 84:164942

ORIGINAL REFERENCE NO.: 84:26787a,26790a

TITLE: Reaction of an N-silylated iminophosphine
(phospha(III)azene) with halogen compounds of
elements of main Groups IV and VII

AUTHOR(S): Niecke, Edgar; Bitter, Wolfhelm

CORPORATE SOURCE: Anorg.-Chem. Inst., Univ. Goettingen,
Goettingen, Fed. Rep. Ger.

SOURCE: Chemische Berichte (1976), 109(2),
415-25
CODEN: CHBEAM; ISSN: 0009-2940

DOCUMENT TYPE: Journal
LANGUAGE: German

GI For diagram(s), see printed CA Issue.

AB The reaction of (Me3Si)2NP:NSiMe3 (I) with RX gave (Me3Si)2NP(R:NSiMe3)X (X, R, given): Cl, CCl3; Br, Me2CH; I, Et. The reaction of I with SiX4 gave II (X = Cl, Br). Similarly, I and GeCl4 gave (Me3Si)2NP(Cl(NSiMe3)GeCl3, which cyclized to give III. The reaction of I with SnCl4 gave (Me3Si)2NP(NSiMe3)Cl2

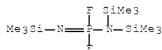
and SnCl₂. Halogenation of I gave, quant., (Me₃Si)2NP(:NSiMe₃)X₂ [X = Cl, F, Br (IV), I (V)]. Decomposition of IV and V gave VI (X = Br, I).

IT 58972-02-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 58972-02-4 HCAPLUS

CN Phosphoramidimidic difluoride, tris(trimethylsilyl)- (9CI) (CA
INDEX NAME)



CC 29-7 (Organometallic and Organometalloidal Compounds)

IT 50732-23-5P 58971-93-0P 58971-94-1P 58971-95-2P 58971-96-3P
58971-97-4P 58971-98-5P 58971-99-6P 58972-00-2P 58972-01-3P
58972-02-4P 58972-03-5P 58972-04-6P 58972-05-7P
58972-06-8P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

OS.CITING REF COUNT: 11 THERE ARE 11 CAPLUS RECORDS THAT CITE THIS
RECORD (11 CITINGS)

L26 ANSWER 25 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1975:86342 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 82:86342

ORIGINAL REFERENCE NO.: 82:13803a,13806a

TITLE: 2-(Isocyanatoalkenyl)tetrafluorophosphoranes

AUTHOR(S): Markovskii, L. N.; Stukalo, E. A.

CORPORATE SOURCE: Inst. Org. Chem., Kiev, USSR

SOURCE: Phosphorus and the Related Group V Elements (1974), 4(4), 237-40

CODEN: PHUSBV; ISSN: 0369-9722

DOCUMENT TYPE: Journal

LANGUAGE: English

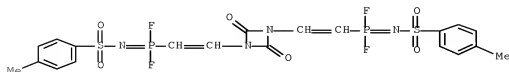
AB The fluorination of Cl₂P(O)CH:CRN:CCl₂ I (R = H, Me) with NaF gave F₂P(O)CH:CRN:CCl₂ III, which are converted by hexamethyl-disiloxane or hexamethyldisilthiane to F₂P(O)CH:CRN:CCl₂ [R₁ = NCO (III), NCS]. The reaction of III with SF₄ yields F₄PCH:CRNCO IV. Treatment of I or II with SbF₃ produces F₂P(O)CH:CRN:CF₂, which during the reaction isomerize to IV.

IT 55422-32-7P 55422-33-8P

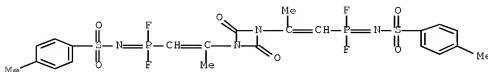
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 55422-32-7 HCAPLUS

CN Phosphonimidic difluoride, P,P'-[(2,4-dioxo-1,3-diazetidino-1,3-diyl)di-2,1-ethenediyl]bis[N-[(4-methylphenyl)sulfonyl]- (9CI) (CA
INDEX NAME)



RN 55422-33-8 HCAPLUS
 CN Phosphonimidic difluoride, P,P'-[(2,4-dioxo-1,3-diazetidino-1,3-diyl)bis(2-methyl-2,1-ethenediyl)]bis[N-[(4-methylphenyl)sulfonyl]-(9CI) (CA INDEX NAME)



CC 29-7 (Organometallic and Organometalloidal Compounds)
 IT 54943-85-0P 55422-21-4P 55422-24-7P 55422-25-8P 55422-26-9P
 55422-27-0P 55422-28-1P 55422-29-2P 55422-30-5P 55422-31-6P
 55422-32-7P 55422-33-8P 55474-10-7P
 55500-49-7P 55523-01-8P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS
 RECORD (2 CITINGS)

L26 ANSWER 26 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1972:434644 HCAPLUS Full-text

DOCUMENT NUMBER: 77:34644

ORIGINAL REFERENCE NO.: 77:5779a,5782a

TITLE: Solvolysis of halo phosphazenes

AUTHOR(S): Roesky, H. W.; Kultz, B. H.; Grimm, L. F.

CORPORATE SOURCE: Inst. Anorg. Chem. I, Univ. Frankfurt,

Frankfurt/M., Fed. Rep. Ger.

SOURCE: Zeitschrift fuer Anorganische und Allgemeine

Chemie (1972), 389(2), 167-76

CODEN: ZAACAB; ISSN: 0044-2313

DOCUMENT TYPE: Journal

LANGUAGE: German

AB SPX2N:PX3 (X = F and/or Cl) reacted with MeOH or EtOH with cleavage of a P-Cl bond to give 9 S-alkyl esters RSPX2:NP(O)X2. The mechanism of the rearrangement of O-alkyl to S-alkyl esters was discussed and an unambiguous structural assignment was made based on ir or NMR investigations. Strong carboxylic acids reacted to give SPX2NHP(O)X2, whereas weak carboxylic acids e.g. AcOH yielded SPX2NHC(O)Me derivs. These compds. were also prepared from P amides, SPX2NH2, and AcCl.

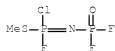
IT 33926-65-7P 33926-67-9P 37632-45-4P

37632-46-5P 37632-48-7P 37758-23-9P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

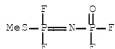
RN 33926-65-7 HCAPLUS

CN Phosphorochloridofluoridimidothioic acid, (difluorophosphinyl)-, methyl ester (8CI, 9CI) (CA INDEX NAME)



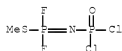
RN 33926-67-9 HCAPLUS

CN Phosphorodifluoridimidothioic acid, (difluorophosphinyl)-, methyl ester (8CI, 9CI) (CA INDEX NAME)



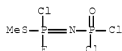
RN 37632-45-4 HCAPLUS

CN Phosphorodifluoridimidothioic acid, (dichlorophosphinyl)-, methyl ester (9CI) (CA INDEX NAME)



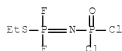
RN 37632-46-5 HCAPLUS

CN Phosphorochloridofluoridimidothioic acid, (dichlorophosphinyl)-, methyl ester (9CI) (CA INDEX NAME)



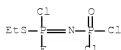
RN 37632-48-7 HCAPLUS

CN Phosphorodifluoridimidothioic acid, (dichlorophosphinyl)-, ethyl ester (9CI) (CA INDEX NAME)

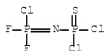


RN 37758-23-9 HCAPLUS

CN Phosphorochloridofluoridimidothioic acid, (dichlorophosphinyl)-, ethyl ester (9CI) (CA INDEX NAME)



IT 24341-15-9 25518-96-1 25518-97-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (solvolysis of)
 RN 24341-15-9 HCAPLUS
 CN Phosphorimidic chloride difluoride, (dichlorophosphinothioyl)- (8CI, 9CI) (CA INDEX NAME)



RN 25518-96-1 HCAPLUS
 CN Phosphorimidic chloride difluoride, (difluorophosphinothioyl)- (8CI, 9CI) (CA INDEX NAME)



RN 25518-97-2 HCAPLUS
 CN Phosphorimidic chloride difluoride, (chlorofluorophosphinothioyl)- (8CI, 9CI) (CA INDEX NAME)



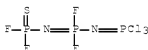
CC 29-7 (Organometallic and Organometalloidal Compounds)

IT 33926-65-7P 33926-66-8P 33926-67-9P
 37632-45-4P 37632-46-5P 37632-47-6P
 37632-48-7P 37632-49-8P 37632-50-1P 37632-51-2P
 37632-52-3P 37758-23-9P

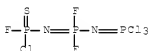
RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

IT 14809-12-2 21207-74-9 21207-75-0 21207-76-1
 24341-15-9 25518-96-1 25518-97-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (solvolysis of)

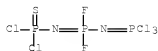
L26 ANSWER 27 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1971:547336 HCAPLUS Full-text
 DOCUMENT NUMBER: 75:147336
 ORIGINAL REFERENCE NO.: 75:23255a,23258a
 TITLE: Phosphorous compounds. 64. Preparation and characterization of linear diphosphazenes
 AUTHOR(S): Roesky, H. W.; Grimm, L. F.; Niecke, E.
 CORPORATE SOURCE: Anorg.-Chem. Inst., Univ. Goettingen, Goettingen, Fed. Rep. Ger.
 SOURCE: Zeitschrift fuer Anorganische und Allgemeine Chemie (1971), 385(1-2), 102-12
 CODEN: ZAACAB; ISSN: 0044-2313
 DOCUMENT TYPE: Journal
 LANGUAGE: German
 AB S:P(XZ)N:PX2 (X, Z = F, Cl) reacted with (Me3Si)2NH to give S:P(XZ)N:PCl2NHSiMe3 and S:PCl2N:PFC1NHSiMe3. These Si derivative reacted with PCl5 to give S:PCl2N:P(XZ)N:PCl3 and S:P(XZ)N:PCl2N:PCl3. S:PF2N:PF2N:PFC12 and S:PF2N:PFC1N:PFC12 were formed by dismutation. S:PCl2N:PF2NH2 reacted with PF3Cl2 to give S:PCl2N:PF2N:PF3. The compds. were characterized by ir, NMR, and mass spectra.
 IT 28316-00-9P 28316-01-0P 34118-55-3P
 34118-59-7P 34118-60-0P 34118-61-1P
 34118-62-2P
 RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)
 RN 28316-00-9 HCAPLUS
 CN Phosphorimidic trichloride, [N-(difluorophosphinothioyl)-P,P-difluorophosphinimyl]- (8CI) (CA INDEX NAME)



RN 28316-01-0 HCAPLUS
 CN Phosphorimidic trichloride, [N-(chlorofluorophosphinothioyl)-P,P-difluorophosphinimyl]- (8CI) (CA INDEX NAME)

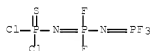


RN 34118-55-3 HCAPLUS
 CN Phosphorimidic trichloride, [N-(dichlorophosphinothioyl)-P,P-difluorophosphinimyl]- (8CI) (CA INDEX NAME)



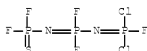
RN 34118-59-7 HCAPLUS

CN Phosphorimidic trifluoride, [N-(dichlorophosphinothiyl)-P,P-difluorophosphinimyl]- (8CI) (CA INDEX NAME)



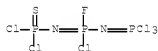
RN 34118-60-0 HCAPLUS

CN Phosphorimidic dichloride fluoride, [N-(difluorophosphinothiyl)-P,P-difluorophosphinimyl]- (8CI) (CA INDEX NAME)



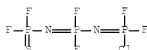
RN 34118-61-1 HCAPLUS

CN Phosphorimidic trichloride, [P-chloro-N-(dichlorophosphinothiyl)-P-fluorophosphinimyl]- (8CI) (CA INDEX NAME)



RN 34118-62-2 HCAPLUS

CN Phosphorimidic chloride difluoride, [N-(difluorophosphinothiyl)-P,P-difluorophosphinimyl]- (8CI) (CA INDEX NAME)



CC 78 (Inorganic Chemicals and Reactions)

IT 17661-22-2P 28316-00-9P 28316-01-0P
34118-49-5P 34118-50-8P 34118-51-9P 34118-52-0P
34118-55-3P 34118-56-4P 34118-57-5P
34118-59-7P 34118-60-0P 34118-61-1P
34118-62-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

L26 ANSWER 28 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1971:536659 HCAPLUS Full-text

DOCUMENT NUMBER: 75:136659

ORIGINAL REFERENCE NO.: 75:21553a,21556a

TITLE: Formation of an S-methyl derivative from the
reaction of methanol with compounds of the type
S:PX2N:PF2Cl

AUTHOR(S): Roesky, H. W.; Grimm, L. F.

CORPORATE SOURCE: Anorg.-Chem. Inst., Univ. Goettingen,
Goettingen, Fed. Rep. Ger.

SOURCE: Journal of the Chemical Society [Section] D:
Chemical Communications (1971), (17),
998

CODEN: CCJDAO; ISSN: 0577-6171

DOCUMENT TYPE: Journal

LANGUAGE: English

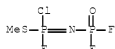
AB S:PX2N:PF2Cl (X = F or Cl) reacted with MeOH to give MeSPX2:NPF2:O, which was
characterized by ir and NMR spectra.

IT 33926-65-7P 33926-67-9P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

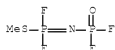
RN 33926-65-7 HCAPLUS

CN Phosphorodifluoridimidothioic acid, (difluorophosphinyl)-,
methyl ester (8CI, 9CI) (CA INDEX NAME)



RN 33926-67-9 HCAPLUS

CN Phosphorodifluoridimidothioic acid, (difluorophosphinyl)-, methyl
ester (8CI, 9CI) (CA INDEX NAME)

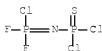


IT 24341-15-9 25518-96-1 25518-97-2

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with methanol)

RN 24341-15-9 HCAPLUS

CN Phosphorimidic chloride difluoride, (dichlorophosphinothioyl)- (8CI,
9CI) (CA INDEX NAME)



RN 25518-96-1 HCAPLUS

CN Phosphorimidic chloride difluoride, (difluorophosphinothiyl)- (8Cl, 9Cl) (CA INDEX NAME)



RN 25518-97-2 HCAPLUS

CN Phosphorimidic chloride difluoride, (chlorofluorophosphinothiyl)- (8Cl, 9Cl) (CA INDEX NAME)



CC 78 (Inorganic Chemicals and Reactions)

IT 33926-65-7P 33926-66-8P 33926-67-9P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT 24341-15-9 25518-96-1 25518-97-2

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with methanol)

L26 ANSWER 29 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1970:455568 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 73:55568

ORIGINAL REFERENCE NO.: 73:9129a,9132a

TITLE: Phosphorus compounds. 52. Splitting reactions
at the silicon-nitrogen bond with

N-trihalophosphoranylidene compounds

Roesky, Herbert W.; Boewing, Walter G.

CORPORATE SOURCE: Anorg.-Chem. Inst., Univ. Goettingen,

Goettingen, Fed. Rep. Ger.

SOURCE: Chemische Berichte (1970), 103(7),
2281-7

CODEN: CHBEAM; ISSN: 0009-2940

DOCUMENT TYPE: Journal

LANGUAGE: German

AB RN:PX3 reacted with Me3SiR1 to give RN:PXnR13-n (I) (where R = FSO2, ClSO2, or
P3N3F5; X = F or Cl; R1 = NMe2 or NCS; and n = 2 or 1) with 12-17% yield for

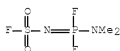
R1 = NCS and 60-91% yield for R1 = NMe2. The properties, NMR, ir, and mass spectra are reported for I.

IT 28924-16-5P 28924-17-6P 28925-29-3P
28925-30-6P 28925-31-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

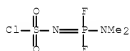
RN 28924-16-5 HCAPLUS

CN Sulfamoyl fluoride, N-[(dimethylamino)difluorophosphoranylidene]-
(CA INDEX NAME)



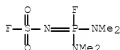
RN 28924-17-6 HCAPLUS

CN Sulfamoyl chloride, N-[(dimethylamino)difluorophosphoranylidene]-
(CA INDEX NAME)



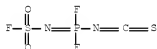
RN 28925-29-3 HCAPLUS

CN Sulfamoyl fluoride, N-[bis(dimethylamino)fluorophosphinylidene]-
(CA INDEX NAME)



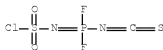
RN 28925-30-6 HCAPLUS

CN Sulfamoyl fluoride, N-(difluoroisothiocyanatophosphoranylidene)-
(CA INDEX NAME)



RN 28925-31-7 HCAPLUS

CN Sulfamoyl chloride, N-(difluoroisothiocyanatophosphoranylidene)-
(CA INDEX NAME)



CC 23 (Aliphatic Compounds)

IT 28924-16-5P 28924-17-6P 28925-29-3P
 28925-30-6P 28925-31-7P 28925-32-8P
 28925-33-9P 28925-34-0P 28925-35-1P 28981-20-6P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

L26 ANSWER 30 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1970:441397 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 73:41397

ORIGINAL REFERENCE NO.: 73:6823a,6826a

TITLE: Phosphorus compounds. 50. Reactions with
 N-halophosphoranylidene thiophosphoryl dihalide
 amides

AUTHOR(S): Roesky, Herbert W.; Grimm, Ludwig F.

CORPORATE SOURCE: Anorg.-Chem. Inst., Univ. Goettingen,
 Goettingen, Fed. Rep. Ger.

SOURCE: Chemische Berichte (1970), 103(6),
 1664-73
 CODEN: CHBEAM; ISSN: 0009-2940

DOCUMENT TYPE: Journal

LANGUAGE: German

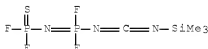
AB Reaction of S:PX2N:PF3 (where X = Cl or F) with Me3SiNMe2 gave 65-72%
 S:PX2N:PF2NMe2 (I). I (X = F) reacted with Me3SiNR2 (where R = Me or Et) to
 give 40-55% S:PF2N:PF(NMe2)(NR2). Similarly prepared were S:PF2N:PF2R1 (where
 R1 = N:C:NSiMe3 or NCS). The substitutions occurred only at the PF3 group and
 isomeric compds. were not formed. S:PCl2NH2 and excess PF3C12 gave 10%
 S:PCl2NPFC12. S:PF2N:PF2Br (25%) and 28% S:PFC1N:PF2Br were formed by the
 cleavage of the corresponding I with HBr. The 1H-, 19F-NMR, ir, and mass
 spectra of the compds. prepared were reported and discussed.

IT 27351-98-0P 27351-99-1P 27352-02-9P
 27352-03-0P 27352-04-1P 27352-05-2P
 27352-06-3P 27352-07-4P 27352-09-6P
 27352-10-9P 27352-11-0P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

RN 27351-98-0 HCAPLUS

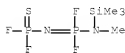
CN Phosphoramidothioic difluoride,
 [difluoro[[[(trimethylsilyl)imidocarbonyl]amino]phosphoranylidene]-
 (8CI) (CA INDEX NAME)



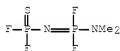
RN 27351-99-1 HCAPLUS

CN Phosphoramidothioic difluoride,
 [difluoro[methyl(trimethylsilyl)amino]phosphoranylidene]- (8CI) (CA

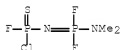
INDEX NAME)



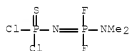
RN 27352-02-9 HCAPLUS

CN Phosphoramidithioic difluoride,
[(dimethylamino)difluorophosphoranylidene]- (8CI) (CA INDEX NAME)

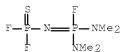
RN 27352-03-0 HCAPLUS

CN Phosphoramidimidic difluoride,
N'-(chlorofluorophosphinothioyl)-N,N-dimethyl- (CA INDEX NAME)

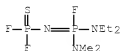
RN 27352-04-1 HCAPLUS

CN Phosphoramidithioic dichloride,
[(dimethylamino)difluorophosphoranylidene]- (8CI) (CA INDEX NAME)

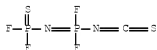
RN 27352-05-2 HCAPLUS

CN Phosphoramidithioic difluoride,
[bis(dimethylamino)fluorophosphoranylidene]- (8CI) (CA INDEX NAME)

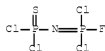
RN 27352-06-3 HCAPLUS
 CN Phosphoramidothioic difluoride,
 [(diethylamino) (dimethylamino) fluorophosphoranylidene]- (8CI) (CA
 INDEX NAME)



RN 27352-07-4 HCAPLUS
 CN Phosphoramidothioic difluoride,
 (difluoroisothiocyanatophosphoranylidene)- (8CI) (CA INDEX NAME)



RN 27352-09-6 HCAPLUS
 CN Phosphorimidic dichloride fluoride, (dichlorophosphinothioyl)- (8CI)
 (CA INDEX NAME)



RN 27352-10-9 HCAPLUS
 CN Phosphorimidic bromide difluoride, (difluorophosphinothioyl)- (8CI)
 (CA INDEX NAME)



RN 27352-11-0 HCAPLUS
 CN Phosphorimidic bromide difluoride, (chlorofluorophosphinothioyl)-
 (8CI) (CA INDEX NAME)



CC 78 (Inorganic Chemicals and Reactions)
 IT 27351-98-0P 27351-99-1P 27352-00-7P
 27352-02-9P 27352-03-0P 27352-04-1P
 27352-05-2P 27352-06-3P 27352-07-4P
 27352-08-5P 27352-09-6P 27352-10-9P
 27352-11-0P 27375-32-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS
 RECORD (3 CITINGS)

L26 ANSWER 31 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1970:420978 HCAPLUS Full-text

DOCUMENT NUMBER: 73:20978

ORIGINAL REFERENCE NO.: 73:3479a,3482a

TITLE: New anionic derivative of P3N3F6

AUTHOR(S): Douglas, W. M.; Cooke, M.; Lustig, M.; Ruff, J.
 K.

CORPORATE SOURCE: Dep. of Chem., Univ. of Georgia, Athens, GA, USA

SOURCE: Inorganic and Nuclear Chemistry Letters (1970), 6(4), 409-11

CODEN: INUCAF; ISSN: 0020-1650

DOCUMENT TYPE: Journal

LANGUAGE: English

GI For diagram(s), see printed CA Issue.

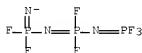
AB CsF reacts with the cyclic phosphonitride fluoride trimer, P3N3F6, in anhydrous MeCN to give CsP3N3F7. Possible structures for the anion P3N3F7- are linear PF3:NPF2:NPF2:N- or cyclic (I).

IT 27321-60-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

RN 27321-60-4 HCAPLUS

CN Phosphorimidic trifluoride, [N-(P,P-difluorophosphinimyl)-P,P-difluorophosphinimyl]-, ion(1-), cesium (8CI) (CA INDEX NAME)



● Cs+

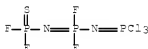
CC 78 (Inorganic Chemicals and Reactions)

IT 27321-60-4P

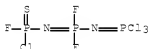
RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

L26 ANSWER 32 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1970:128270 HCAPLUS [Full-text](#)
 DOCUMENT NUMBER: 72:128270
 ORIGINAL REFERENCE NO.: 72:22995a,22998a
 TITLE: Phosphorus compounds. 51. Method for preparation of compounds of the type $R-(N=PX_2)_x-N=PCl_3$
 AUTHOR(S): Roesky, Herbert W.; Grimm, Ludwig F.
 CORPORATE SOURCE: Anorg.-Chem. Inst., Univ. Goettingen, Goettingen, Fed. Rep. Ger.
 SOURCE: Angewandte Chemie, International Edition in English (1970), 9(3), 244-5
 CODEN: ACIEAY; ISSN: 0570-0833
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB XP(:S)FN:PF2NHSiMe3 were treated with PCl5 at 60-80° to give XP(:S)FN:PF2N:PCl3 (I) (where X = F, 25% yield; or X = Cl, 45% yield). I will in turn add another PN:P-linkage on treatment with HN(SiMe3)2 and PCl5.
 IT 28316-00-9P 28316-01-0P
 RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)
 RN 28316-00-9 HCAPLUS
 CN Phosphorimidic trichloride, [N-(difluorophosphinothiyl)-P,P-difluorophosphinimyl]- (8CI) (CA INDEX NAME)



RN 28316-01-0 HCAPLUS
 CN Phosphorimidic trichloride, [N-(chlorofluorophosphinothiyl)-P,P-difluorophosphinimyl]- (8CI) (CA INDEX NAME)



CC 78 (Inorganic Chemicals and Reactions)
 IT 28316-00-9P 28316-01-0P
 RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

L26 ANSWER 33 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1970:8805 HCAPLUS [Full-text](#)
 DOCUMENT NUMBER: 72:8805
 ORIGINAL REFERENCE NO.: 72:1589a,1592a
 TITLE: Phosphorus compounds. XL. Substitution reactions of phosphorus and sulfur amides
 AUTHOR(S): Roesky, Herbert W.; Boewing, Walter G.
 CORPORATE SOURCE: Anorg.-Chem. Inst., Univ. Goettingen, Goettingen, Fed. Rep. Ger.
 SOURCE: Zeitschrift fuer Naturforschung, Teil B:

Anorganische Chemie, Organische Chemie,
 Biochemie, Biophysik, Biologie (1969),
 24(10), 1250-3
 CODEN: ZENBAX; ISSN: 0044-3174

DOCUMENT TYPE:

Journal

LANGUAGE:

German

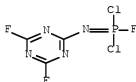
AB MeP(S)FNH₂ (37 g) and 20.2 g Et₃N in 300 ml Et₂O were treated with 21.7 g Me₃SiCl at room temperature to give 83% MeP(S)FNH₃SiMe₃, b_{0.01} 33°; similarly prepared was 75% EtP(S)FNH₃SiMe₃, b_{0.01} 42°. EtP(S)FNH₂ (65 g) was added dropwise to a suspension of 150 g PCl₅ in 100 ml CCl₄ at room temperature to give 22% EtP(S)FNPCl₃. Partial ammonolysis of PhPSF₂ at -80° gave 16% PhP(S)FNH₂, b_{0.01} 110°. 2,4,4,6,6-Pentafluoro-2-amino-2,2,4,4,6,6-hexahydro-1,3,5,2,4,6-triazatriphosphorine (P₃N₃F₅NH₂) (50 g) was condensed with a 2-fold excess of PF₃Cl₂ at -80° to give 96% P₃N₃F₅NPF₃, b₂₈ 37°. Similarly 2-amino-4,6-difluoro-s-triazine and PF₃Cl₂ give 24% 2-(N-dichlorofluorophosphanylideneimino)-4,6-difluoro-s-triazine, b_{0.01} 43°. FSO₂NH₂ was added dropwise to PF₃Cl₂ at -80° to give 65% FSO₂NPF₃, b₁₇ 30°, which was treated with PF₃Cl₂ at 50° to give 35% FSO₂NPF₂Cl₁, b₁₃ 46°. The compds. were characterized by ir, NMR, and mass spectra.

IT 24623-74-3P 24623-75-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

RN 24623-74-3 HCAPLUS

CN Phosphorimidic dichloride fluoride, (4,6-difluoro-s-triazin-2-yl)-
 (8CI) (CA INDEX NAME)



RN 24623-75-4 HCAPLUS

CN Sulfamoyl fluoride, N-(chlorodifluorophosphoranylidene)- (CA INDEX NAME)



CC 78 (Inorganic Chemicals and Reactions)

IT 24623-70-9P 24623-71-0P 24623-72-1P 24623-73-2P

24623-74-3P 24623-75-4P 27830-53-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

L26 ANSWER 34 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1969:497887 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 71:97887

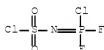
ORIGINAL REFERENCE NO.: 71:18235a,18238a

TITLE: Preparation and characterization of ClSO₂N:PF₃

and ClSO2N:PF2Cl
Roesky, Herbert W.; Grosse Boewing, W.
CORPORATE SOURCE: Univ. Goettingen, Goettingen, Fed. Rep. Ger.
SOURCE: Inorganic and Nuclear Chemistry Letters (1969), 5(7), 597-9
CODEN: INUCAF; ISSN: 0020-1650
DOCUMENT TYPE: Journal
LANGUAGE: German
AB ClSO2NH2 reacts with PF3Cl2 in CC14 at room temperature to give ClSO2N:PF3, 95% yield. Excess PF3Cl2 reacts with ClSO2NPF3 at 50° to give ClSO2N:PF2Cl, 23% yield. The compds. are colorless liqs., fume strongly in air, and are very reactive with traces of moisture.
IT 25417-76-9P 25417-77-0P
RL: SPN (Synthetic preparation); PREP (Preparation of preparation of)
RN 25417-76-9 HCAPLUS
CN Sulfamoyl chloride, N-(trifluorophosphoranylidene)- (CA INDEX NAME)



RN 25417-77-0 HCAPLUS
CN Sulfamoyl chloride, N-(chlorodifluorophosphoranylidene)- (CA INDEX NAME)



CC 78 (Inorganic Chemicals and Reactions)
IT 25417-76-9P 25417-77-0P
RL: SPN (Synthetic preparation); PREP (Preparation of preparation of)

L26 ANSWER 35 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1969:475980 HCAPLUS Full-text
DOCUMENT NUMBER: 71:75980
ORIGINAL REFERENCE NO.: 71:14081a,14084a
TITLE: Nuclear magnetic resonance of phosphorus compounds. XXI. Phosphorus-fluorine coupling constants in compounds with tetra-coordinated phosphorus
AUTHOR(S): Fluck, Ekkehard; Heckmann, Gernot
CORPORATE SOURCE: Univ. Stuttgart, Stuttgart, Fed. Rep. Ger.
SOURCE: Zeitschrift fuer Naturforschung, Teil B: Anorganische Chemie, Organische Chemie, Biochemie, Biophysik, Biologie (1969), 24(8), 953-9
CODEN: ZENBAX; ISSN: 0044-3174
DOCUMENT TYPE: Journal

LANGUAGE: German

AB The ^{31}P and ^{19}F N.-M.R. spectra of a series of F-containing compds. with a PN:P framework are presented as well as P-F coupling data for compds. containing tetra-coordinated P. The compds. studied in detail are: $\text{Cl}_2\text{P}(\text{S})\text{N}:\text{PF}_2\text{Cl}$, $\text{X}_2\text{P}(\text{S})\text{N}:\text{PF}_3$ ($\text{X} = \text{Cl}, \text{F}$), $\text{ClFP}(\text{S})\text{N}:\text{PF}_3$, $\text{ClFP}(\text{S})\text{N}:\text{PCl}_2\text{Ph}$, $\text{ClFP}(\text{S})\text{N}:\text{PClPh}_2$, $\text{ClFP}(\text{S})\text{NHSiMe}_3$, and $\text{F}_2\text{P}(\text{S})\text{NHSiMe}_3$. The relation between the size of the coupling constant and the electronegativity of the atoms bound to a given P atom is discussed.

IT 22341-49-7 22341-50-0 24341-15-9

24341-16-0

RL: PRP (Properties)

(nuclear magnetic resonance of)

RN 22341-49-7 HCAPLUS

CN Phosphorimidic trifluoride, (chlorofluorophosphinothioyl)- (8CI)
(CA INDEX NAME)



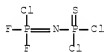
RN 22341-50-0 HCAPLUS

CN Phosphorimidic trifluoride, (difluorophosphinothioyl)- (8CI, 9CI)
(CA INDEX NAME)



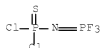
RN 24341-15-9 HCAPLUS

CN Phosphorimidic chloride difluoride, (dichlorophosphinothioyl)- (8CI, 9CI) (CA INDEX NAME)



RN 24341-16-0 HCAPLUS

CN Phosphorimidic trifluoride, (dichlorophosphinothioyl)- (8CI) (CA INDEX NAME)



CC 73 (Spectra and Other Optical Properties)
 IT 22341-49-7 22341-50-0 23755-68-2
 23755-70-6 24341-15-9 24341-16-0
 24341-19-3, Phosphoramidothioic chloride fluoride,
 (dichlorophenylphosphoranylidene)- 24341-20-6
 RL: PRP (Properties)
 (nuclear magnetic resonance of)

L26 ANSWER 36 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1969:456191 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 71:56191

ORIGINAL REFERENCE NO.: 71:10341a,10344a

TITLE: Phosphorus compounds. XXVIII. Preparation and characterization of thiophosphoryl compounds containing a phosphorus-nitrogen double bond

AUTHOR(S): Roesky, Herbert W.; Grimm, Ludwig F.

CORPORATE SOURCE: Univ. Goettingen, Goettingen, Fed. Rep. Ger.

SOURCE: Chemische Berichte (1969), 102(7),
 2319-29

CODEN: CHBEAM; ISSN: 0009-2940

DOCUMENT TYPE: Journal

LANGUAGE: German

AB The reaction of SPFC1NH2 with PF3Cl2 gave SPFC1N:PF2Cl. Similarly were prepared 14 SPX2N:PY3 (X = F or Cl; Y = F, Cl, or Ph). The reaction of SPFBr2 with NH3 in Et2O at -80° gave SPFBrNH2. The treatment of SPFC12NH2 with SbF3 in the presence of SbCl5 gave SPF2NH2. Mass, ir, and 1H- and 19F-N.M.R. spectra are given.

IT 22341-49-7P 22341-50-0P, Phosphorimidic trifluoride, (difluorophosphinothioyl)- 24341-15-9P
 24341-16-0P 25518-96-1P 25518-97-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

RN 22341-49-7 HCAPLUS

CN Phosphorimidic trifluoride, (chlorofluorophosphinothioyl)- (8CI)
 (CA INDEX NAME)



RN 22341-50-0 HCAPLUS

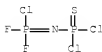
CN Phosphorimidic trifluoride, (difluorophosphinothioyl)- (8CI, 9CI)
 (CA INDEX NAME)



RN 24341-15-9 HCAPLUS

CN Phosphorimidic chloride difluoride, (dichlorophosphinothioyl)- (8CI,

9CI) (CA INDEX NAME)



RN 24341-16-0 HCAPLUS

CN Phosphorimidic trifluoride, (dichlorophosphinothiyl)- (8CI) (CA INDEX NAME)



RN 25518-96-1 HCAPLUS

CN Phosphorimidic chloride difluoride, (difluorophosphinothiyl)- (8CI, 9CI) (CA INDEX NAME)



RN 25518-97-2 HCAPLUS

CN Phosphorimidic chloride difluoride, (chlorofluorophosphinothiyl)- (8CI, 9CI) (CA INDEX NAME)



CC 78 (Inorganic Chemicals and Reactions)

IT 14809-09-7P 22341-49-7P 22341-50-0P,
 Phosphorimidic trifluoride, (difluorophosphinothiyl)-
 24341-15-9P 24341-16-0P 24341-19-3P
 24341-20-6P 25518-84-7P 25518-85-8P 25518-86-9P 25518-89-2P
 25518-90-5P 25518-91-6P 25518-92-7P 25518-96-1P
 25518-97-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS
 RECORD (3 CITINGS)

ACCESSION NUMBER: 1969:92790 HCAPLUS Full-text
DOCUMENT NUMBER: 70:92790
ORIGINAL REFERENCE NO.: 70:17351a,17354a
TITLE: Synthesis of trifluorophosphazophosphoryl compounds
AUTHOR(S): Lustig, Max
CORPORATE SOURCE: Memphis State Univ., Memphis, TN, USA
SOURCE: Inorganic Chemistry (1969), 8(3),
443-5
CODEN: INOCAJ; ISSN: 0020-1669
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Trifluorophosphazosulfuryl fluoride, PF₃NSO₂F, trifluorophosphazophosphoryl fluoride, PF₃NP(O)F₂, and trifluorophosphazothiophosphoryl fluoride, PF₃NP(S)F₂, are prepared by the reaction between PF₃Cl₂ and FSO₂NH₂, F₂P(O)NH₂, and F₂P(S)NH₂, resp. Some properties of these new compds., including F₂P(S)NH₂, have been studied.
IT 22341-50-0P 22474-62-0P 22474-63-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 22341-50-0 HCAPLUS
CN Phosphorimidic trifluoride, (difluorophosphinothioyl)- (8CI, 9CI)
(CA INDEX NAME)



RN 22474-62-0 HCAPLUS
CN Sulfamoyl fluoride, N-(trifluorophosphoranylidene)- (CA INDEX NAME)



RN 22474-63-1 HCAPLUS
CN Phosphorimidic trifluoride, (difluorophosphinyl)- (8CI, 9CI) (CA INDEX NAME)



CC 78 (Inorganic Chemicals and Reactions)
IT 14809-12-2P 22341-50-0P 22474-62-0P
22474-63-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

L26 ANSWER 38 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1969:83821 HCAPLUS Full-text

DOCUMENT NUMBER: 70:83821

ORIGINAL REFERENCE NO.: 70:15663a,15666a

TITLE: Phosphorus compounds. XXVII. Preparation of trifluorophosphazo-thiophosphoryl chloride fluoride, trifluorophosphazothiophosphoryl difluoride, and thiophosphoryl amide bromide fluoride

AUTHOR(S): Roesky, Herbert W.; Grimm, L. F.

CORPORATE SOURCE: Univ. Goettingen, Goettingen, Fed. Rep. Ger.

SOURCE: Inorganic and Nuclear Chemistry Letters (1969), 5(1), 13-16

CODEN: INUCAF; ISSN: 0020-1650

DOCUMENT TYPE: Journal

LANGUAGE: German

AB ClFP(:S)NH₂ or F₂P(:S)NH₂ reacts with Cl₂PF₃ at -20° in a 1:1 molar ratio to give ClFP(:S)N:PF₃, b₅₈ 34°, and F₂P(:S)N:PF₃ b₂₄₂ 31°, resp. S:PFBr₂ reacts with NH₃ in a 1:2 molar ratio at -80° in Et₂O to form BrFP(:S)NH₂, b_{0.03} 39-40°. The compds. were characterized by N.M.R., ir, and mass spectra.

IT 22341-49-7P 22341-50-0P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

RN 22341-49-7 HCAPLUS

CN Phosphorimidic trifluoride, (chlorofluorophosphinothiyl)- (8CI) (CA INDEX NAME)



RN 22341-50-0 HCAPLUS

CN Phosphorimidic trifluoride, (difluorophosphinothiyl)- (8CI, 9CI) (CA INDEX NAME)



CC 78 (Inorganic Chemicals and Reactions)

IT 14809-09-7P 22341-49-7P 22341-50-0P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

L26 ANSWER 39 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1968:13094 HCAPLUS Full-text

DOCUMENT NUMBER: 68:13094

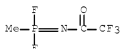
ORIGINAL REFERENCE NO.: 68:2523a

TITLE: Characteristics of alkyl dichlorophosphazotrifluoracetyls and of their

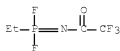
reaction products
 Lyсенко, V. V.; Ivin, S. Z.; Karavanov, K. V.;
 Fedotova, V. V.
 SOURCE: Zhurnal Obshchei Khimii (1967), 37(5),
 1096-105
 CODEN: ZOKHA4; ISSN: 0044-460X
 DOCUMENT TYPE: Journal
 LANGUAGE: Russian

AB RPC12:NCOCF3 (I) showed evidence of decreasing conjugation in the P:NC:O system with increasing electronegativity of R. I (R = CF3) kept in moist air 2 hrs. gave 99% CC13P(O)(Cl)NHCOCF3, m. 105°. I (R = Et) in C6H6 treated in the cold with 1 mole 100% HCO2H gave 50% EtP(O)(Cl)NHCOCF3, m. 45-6°; CO and HCl also formed. AcOH, finally at 40-50° 4 hrs., then in vacuo at 30°, similarly gave 77% same product, along with AcCl. I and 2 moles EtONa in EtOH at -5° gave the following RP(OEt)2:NCOCF3 (R, % yield, b.p., d20, and n20D given): Me, 33, b1 83-84°, 1.2310, 1.4022; Et, 24, b2.5 94-5°, 1.1820, 1.4020; iso-Pr, 25, b0.2 78-80°, 1.1512, 1.4050; MeEtCH 48, b2 100-4°, 1.1345, 1.4078. The molar refractions of these were 0.5-0.6 units below the calculated when the group refraction for P:N was taken as 5.78. I and EtSNa in Et2O, finally at reflux, gave 18% EtP(SET)2:NCOCF3, b1 120-4°, 1.2702, 1.4949. I and EtOH in the presence of Et3N in Et2O gave after 1 hr. at room temperature 60% EtP(OEt)(Cl):NCOCF3, b1 78-84°, 1.3244, 1.4175, which retained some diethoxy analog after repeated distns. Similarly was prepared 49% EtP(Cl)(OCH2CHMe2):NCOCF3, b4 103-8°, 1.2308, 1.4210. I and 1 mole Et2NH in Et2O-Et3N in the cold gave 47% EtP(NEt2)(Cl):NCOCF3, b2-3 121-3°, 1.2522, 1.4459. I (R = Me) and SbF3 (mixed slowly) gave 33.5% MePF2:NCOCF3, b1.5 37-9°, 1.5064, 1.3508; similarly was prepared 42% Et analog, b1.5 41-1.5°, 1.4509, 1.3576; and 23.7% iso-Pr analog, b1 38-42°, 1.3625, 1.3642. I (R = Me) heated to 180° decomposed to 65% MePOCl2 and 55.5% CF3CN; similarly I (R = Et) gave 52% EtPOCl2, b. 175-6°, 1.3750, 1.4641, and 51% CF2CN. I (R = Et) (5.6 g.) added slowly at -50° to 3.1 g. AlCl3, then warmed to room temperature gave a grey mass, which heated to 60-70°, finally in vacuo 1 hr., gave 99% I (R = Et).AlCl3 (Ia) complex, a viscous brown oil; a similar oily complex was formed with I (R = iso-Pr). The complex Ia and pyridine gave 77.5% I (R = Et). Dry HCl passed into EtP(OEt)2:NCOCF3 at 10-15° (cooling) gave 56% CF3CONHP(O)Et(OEt), b0.5 105°, 1.3250, 1.4023. Addition of 7 g. EtP(NEt2)(Cl):NCOCF3 to 0.57 g. Na dissolved in absolute EtOH gave after refluxing 1 hr. 69% EtP(OEt)(NEt2):NCOCF3, b0.5-1 110-12°, 1.1405, 1.4623.

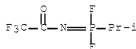
IT 17151-84-7P 17151-85-8P 17151-86-9P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 17151-84-7 HCAPLUS
 CN Phosphonimidic difluoride, P-methyl-N-(trifluoroacetyl)- (8CI) (CA INDEX NAME)



RN 17151-85-8 HCAPLUS
 CN Phosphonimidic difluoride, P-ethyl-N-(trifluoroacetyl)- (8CI) (CA INDEX NAME)



RN 17151-86-9 HCAPLUS

CN Phosphonimide difluoride, P-isopropyl-N-(trifluoroacetyl)- (8CI)
(CA INDEX NAME)

CC 29 (Organometallic and Organometalloidal Compounds)

IT 16966-78-2P 17151-40-5P 17151-41-6P 17151-75-6P 17151-76-7P

17151-77-8P 17151-78-9P 17151-79-0P 17151-80-3P 17151-81-4P

17151-82-5P 17151-83-6P 17151-84-7P

17151-85-8P 17151-86-9P 17151-88-1P

17151-89-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

L26 ANSWER 40 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1967:463859 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 67:63859

ORIGINAL REFERENCE NO.: 67:11975a,11978a

TITLE: Preparation of alkyl difluorophosphazocarbacyls

INVENTOR(S): Ivin, S. Z.; Karavanov, K. V.; Lysenko, V. V.

SOURCE: U.S.S.R. From: Izobret., Prom. Obraztsy,

Tovarnye Znaki 1966, 43(23), 17.

CODEN: URXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Russian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 188967		19661117	SU	196509 17

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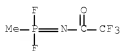
AB The title compds. are prepared from the reaction of
alkyldichlorophosphazocarbacyls with SbF₃ in vacuo.

IT 17151-84-7P 17151-85-8P 17151-86-9P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

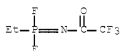
RN 17151-84-7 HCAPLUS

CN Phosphonimide difluoride, P-methyl-N-(trifluoroacetyl)- (8CI) (CA
INDEX NAME)



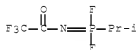
RN 17151-85-8 HCAPLUS

CN Phosphonimidic difluoride, P-ethyl-N-(trifluoroacetyl)- (8CI) (CA INDEX NAME)



RN 17151-86-9 HCAPLUS

CN Phosphonimidic difluoride, P-isopropyl-N-(trifluoroacetyl)- (8CI) (CA INDEX NAME)



IC C07F

CC 23 (Aliphatic Compounds)

IT 17151-84-7P 17151-85-8P 17151-86-9P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

L26 ANSWER 41 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1965:497909 HCAPLUS Full-text

DOCUMENT NUMBER: 63:97909

ORIGINAL REFERENCE NO.: 63:17949f-h,17950a

TITLE: Alkoxy- and aryloxydihalophosphazonesulfonylaryls

AUTHOR(S): Ivanova, Zh. M.; Levchenko, E. S.; Kirsanov, A. V.

CORPORATE SOURCE: Inst. Org. Chem., Kiev

SOURCE: Zhurnal Obshchei Khimii (1965), 35(9), 1607-12

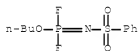
CODEN: ZOKHA4; ISSN: 0044-460X

DOCUMENT TYPE: Journal

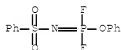
LANGUAGE: Russian

AB Treatment of 0.12 mol ROPCl₂ or ROPF₂ in C₆H₆ at below 50° with 0.05 mol ArSO₂NCI₂ gave after 1 h. 100% residual oily ArSO₂N:PX₂OR (Ar, R, and X shown) after removal of volatile products in vacuo; similar reaction with PhOPX₂ was run with ice cooling initially, then at 50-60° in vacuo: Ph, Me, Cl; Ph, Et, Cl; Ph, Pr, Cl; Ph, Pr, F; Ph, iso-Pr, Cl; Ph, Bu, Cl (Ia); Ph, Bu, F; Ph, Ph, F; Ph, Ph, Cl (I); p-MeC₆H₄, Pr, F; p-MeC₆H₄, iso-Pr, Cl. Exposed to moist air these gave ArSO₂NH₂. I and ice-cold aqueous K₂CO₃ gave 44% PhSO₂NHP(O)(OPh)Cl as K salt (at N), m. 174-6°. Similarly were prepared other ArSO₂NKPOF(OR): Ph, Me, m. 202-5°; Ph, Bu, m. 152-4°; Ph, Ph, m. 131-3°; p-FC₆H₄, Me, m. 167-9°;

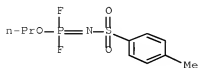
- p-ClC6H4, Me, m. 201-3°; p-BrC6H4, Me, m. 216-17°; o-O2NC6H4, Me, m. 151-2°; m-O2NC6H4, Me, m. 206-8°; p-O2NC6H4, Me, m. 219-20°; p-MeC6H4, Me, m. 218-19°; 1-ClOH7, Me, m. 182-3°. Similarly were obtained PhSO2NKP(O)Cl2, m. 195-6°, and p-MeC6H4SO2NKP(O)Cl2, m. 208-10°, from ArSO2N:PCl2OCHMe2. I and saturated aqueous KF gave after extraction with cold MeOH PhSO2NKP(O)(OPh)Cl, which gave the aniline salt, C18H18ClN2O4PS, m. 112-14°. Ia and aqueous KHF gave PhSO2NH2.ArSO2NKP(O)F2 treated with 1 mol MeONa in dry MeOH gave in 1 h. at room temperature a precipitate of NaF while the filtrate gave ArSO2NKP(O)(OMe)F (II) shown above. Heating aqueous KF with 1-ClOH7/SO2NPCl3 5-10 min. at 50-60° gave 34% 1-ClOH7/SO2NKP(O)F2, m. 264-5°; similarly was prepared p-BrC6H4 analog, m. 269-70°. II and 1 mol MeONa in MeOH gave ArSO2NKP(O)Me2, which on acidification gave the free esters (Ph, m. 106-8°; o-O2NC6H4, m. 135-6°). PhSO2NKP(O)F2 and PhNH2.HCl in aqueous solution gave 68% aniline salt C6H6F2NO3PS.C6H7N; similarly was prepared PhSO2NHP(O)(OMe)F.PhNH2, m. 109-11°.
- IT 4140-38-9P, Phosphorodifluoridimidic acid, (phenylsulfonyl)-, butyl ester 4140-39-0P, Phosphorodifluoridimidic acid, (phenylsulfonyl)-, phenyl ester 4140-41-4P, Phosphorodifluoridimidic acid, (p-(tolylsulfonyl)-, propyl ester 4258-27-9P, Phosphorodifluoridimidic acid, (phenylsulfonyl)-, propyl ester
RL: PREP (Preparation)
(preparation of)
- RN 4140-38-9 HCAPLUS
- CN Phosphorodifluoridimidic acid, N-(phenylsulfonyl)-, butyl ester (CA INDEX NAME)



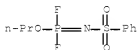
- RN 4140-39-0 HCAPLUS
- CN Phosphorodifluoridimidic acid, N-(phenylsulfonyl)-, phenyl ester (CA INDEX NAME)



- RN 4140-41-4 HCAPLUS
- CN Phosphorodifluoridimidic acid, N-[(4-methylphenyl)sulfonyl]-, propyl ester (CA INDEX NAME)



RN 4258-27-9 HCAPLUS

CN Phosphorodifluoridimidic acid, N-(phenylsulfonyl)-, propyl ester
(CA INDEX NAME)

CC 35 (Noncondensed Aromatic Compounds)

IT 4140-34-5P, Phosphoramidic acid, [(o-nitrophenyl)sulfonyl]-, dimethyl ester 4140-35-6P, Aniline, compound with Me (phenylsulfonyl)phosphoramidofluoridate (1:1) 4140-36-7P, Aniline, compound with (phenylsulfonyl)phosphoramidic difluoride (1:1) 4140-37-8P, Phosphorodichloridimidic acid, (phenylsulfonyl)-, butyl ester 4140-38-9P, Phosphorodifluoridimidic acid, (phenylsulfonyl)-, butyl ester 4140-39-0P, Phosphorodifluoridimidic acid, (phenylsulfonyl)-, phenyl ester 4140-40-3P, Phosphorodichloridimidic acid, (phenylsulfonyl)-, phenyl ester 4140-41-4P, Phosphorodifluoridimidic acid, (p-tolylsulfonyl)-, propyl ester 4140-42-5P, Potassium, [N-(chlorophenoxyphosphinyl)benzenesulfonamido]- 4140-43-6P, Potassium, [N-(fluoromethoxyphosphinyl)benzenesulfonamido]- 4140-44-7P, Potassium, [N-(butoxyfluorophosphinyl)benzenesulfonamido]- 4140-45-8P, Potassium, [N-(fluorophenoxyphosphinyl)benzenesulfonamido]- 4140-46-9P, Potassium, [p-chloro-N-(fluoromethoxyphosphinyl)benzenesulfonamido]- 4140-47-0P, Potassium, [p-bromo-N-(fluoromethoxyphosphinyl)benzenesulfonamido]- 4140-48-1P, Potassium, [N-(fluoromethoxyphosphinyl)-o-nitrobenzenesulfonamido]- 4140-49-2P, Potassium, [N-(fluoromethoxyphosphinyl)-p-nitrobenzenesulfonamido]- 4140-50-5P, Potassium, [N-(fluoromethoxyphosphinyl)-p-toluenesulfonamido]- 4140-51-6P, Potassium, [N-(fluoromethoxyphosphinyl)-1-naphthalenesulfonamido]- 4140-52-7P, Potassium, [N-(dichlorophosphinyl)benzenesulfonamido]- 4140-53-8P, Aniline, compound with Ph (phenylsulfonyl)phosphoramidochloridate (1:1) 4140-54-9P, Potassium, [N-(difluorophosphinyl)-1-naphthalenesulfonamido]- 4140-55-0P, Potassium, [p-bromo-N-(difluorophosphinyl)benzenesulfonamido]- 4140-56-1P, Phosphoramidic acid, (phenylsulfonyl)-, dimethyl ester 4232-96-6P, Phosphorodichloridimidic acid, (phenylsulfonyl)-, isopropyl ester 4232-97-7P, Phosphorodichloridimidic acid, (p-tolylsulfonyl)-, isopropyl ester 4232-98-8P, Potassium, [N-(fluoromethoxyphosphinyl)-m-nitrobenzenesulfonamido]- 4247-66-9P, Potassium, [N-(dichlorophosphinyl)-p-toluenesulfonamido]- 4258-24-6P, Phosphorodichloridimidic acid, (phenylsulfonyl)-, methyl ester 4258-25-7P, Phosphorodichloridimidic acid, (phenylsulfonyl)-, ethyl ester 4258-26-8P, Phosphorodichloridimidic acid, (phenylsulfonyl)-, propyl ester 4258-27-9P, Phosphorodifluoridimidic acid, (phenylsulfonyl)-, propyl ester 4263-51-8P, Potassium, [p-fluoro-N-(fluoromethoxyphosphinyl)benzenesulfonamido]-
RL: PREP (Preparation)
(preparation of)

L26 ANSWER 42 OF 42 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1965:446279 HCAPLUS Full-text
 DOCUMENT NUMBER: 63:46279
 ORIGINAL REFERENCE NO.: 63:8373e-h
 TITLE: Fungicidal compositions
 INVENTOR(S): Lambie, Alan J.; Lane, David W. J.; Saggars,
 David T.
 PATENT ASSIGNEE(S): Fisons Pest Control Ltd.
 SOURCE: 15 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 990111		19650428	GB 1960-16222	196005 07
			<--	
PRIORITY APPLN. INFO.:			GB	196005 07
			<--	
			GB	196009 29
			<--	

GI For diagram(s), see printed CA Issue.

AB The fungicidal composition contains as active ingredient a benzotriazole (I), or the reaction product of maleic acid or anhydride with benzotriazole. Other fungicidal substances such as S, Cu, Ni, or other fungicides may be added. Both as an emulsion and a fine suspension the composition inhibits the growth of parasitic and saprophytic fungi. These compds. are phytotoxic. Thus, β -[2-(4,5,6,7-tetrachlorobenzotriazolyl)]-butyric acid was treated with excess CH_2N_2 to give the Me ester, m. 85-6°. $\text{ClCH}_2\text{CONEt}_2$ 14.9, 4,5,6,7-tetrachlorobenzotriazole Na salt (II) 31.5, and Me_2CO 200 was refluxed 1 hr. to give I ($\text{R} = \text{R}_1 = \text{R}_2 = \text{R}_3 = \text{Cl}$) (III) ($\text{R}_4 = \text{CH}_2\text{CONEt}_2$) 21.5 parts, m. 186-8°. II and ClCO_2Et gave similarly III ($\text{R}_4 = \text{CO}_2\text{Et}$), m. 156-9°. Similarly were prepared the following III (R_4 and m.p. given): CH_2OMe , 109-10°; Me_2NCO , 163-4°; MeNHCO-CH_2 , 268-9°; morpholinocarbonylmethyl, 262-4°; 1-benzotriazolylmethyl, 197-8°; CH_2CONH_2 , 278-9°; MeO_2CCH_2 , 125-7°. III ($\text{R}_4 = \text{H}$) 16.4 and maleic acid 7 in $\text{C}_5\text{H}_5\text{N}$ 45 was heated on a steam bath 10 hrs., treated with Me_2CO 15 parts, cooled, and poured into excess dilute HCl , and the precipitate collected, washed with H_2O , and crystallized from aqueous AcOH to give the reaction product, m. 172°. 5,6-Diamino-1,2,4-trichlorobenzene 11 in AcOH 120 was treated dropwise at 0-5° with NaNO_2 5.5 in H_2O 10 to give 4,5,7-trichlorobenzotriazole 6.1 parts, m. 220-2°; similarly prepared was 4,5,6-trichlorobenzotriazole, m. 279-80°. 5-Methoxybenzotriazole 5 in EtOAc 250 was treated with excess Cl to give the 6-chloro derivative 2.7 parts, m. 206-8°. The tautomerism of I shown occurs only when R_4 is H. In other cases 2 isomers are possible and were not always identified.

IT 4140-38-9F, Phosphorodifluoridimidic acid,

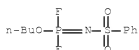
(phenylsulfonyl)-, butyl ester

RL: PREP (Preparation)

(preparation of)

RN 4140-38-9 HCAPLUS

CN Phosphorodifluoridimidic acid, N-(phenylsulfonyl)-, butyl ester (CA INDEX NAME)



IC A01N009-20
 CC 38 (Heterocyclic Compounds (More Than One Hetero Atom))
 IT 4140-37-8P, Phosphorodichloridimidic acid, (phenylsulfonyl)-, butyl ester 4140-38-9P, Phosphorodifluoridimidic acid, (phenylsulfonyl)-, butyl ester 4144-42-7P, Benzotriazole, 4,5,7-trichloro- 4144-43-8P, Benzotriazole, 4,5,6-trichloro- 5560-05-4P, Benzotriazole, 5-chloro-6-methoxy- 92475-52-0P, Benzotriazoleacetic acid, 4,5,6,7-tetrachloro-, methyl ester 93063-98-0P, Benzotriazoleacetamide, 4,5,6,7-tetrachloro- 93112-12-0P, Benzotriazoleacetamide, 4,5,6,7-tetrachloro-N-methyl- 95373-17-4P, Morpholine, 4-[(4,5,6,7-tetrachlorobenzotriazolyl)acetyl]- 95845-58-2P, 1H-Benzotriazole, 1-(benzotriazolylmethyl)-4,5,6,7-tetrachloro-
 RL: PREP (Preparation)
 (preparation of)

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